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N E W

Primary Arithmetic,

EMBRACING

MENTAL AND WRITTEN EXERCISES,

FOR BEGINNERS

BY

BENJAMIN GREENLEAF, A.M.



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P R E F A C E .

THE object of this primary book is to teach the pupil how to think, and to enable him, by an almost imperceptible gradation of thought, to advance from the simplest forms of reasoning to the more vigorous exercises of the mind.

Hence, no arbitrary rules have been introduced, and only such hints and suggestions, with occasional formulæ of reasoning, as were considered absolutely necessary for the profitable study of the lessons.

In order that the reasoning of some of the principal processes might be the more apparent to the beginner, pictures of objects have been, to some extent, introduced. After these, counters are employed, as unit marks; and then follow lessons without any such aids, that the learner may early acquire the habit of depending upon mental resources alone for the solution of problems.

The numerous Pictorial Illustrations of the present edition have been designed and engraved, by skilful artists, especially for this work.

In this edition, the exercises in Written Arithmetic have been extended, and other improvements introduced, with a view of fully adapting the work to the present demands of the best primary schools.

TO TEACHERS.

THE lessons assigned to the learner should never be longer than will admit of being thoroughly prepared for recitation.

The better to secure the attention of each member of the class, and elicit earnestness of thought, the questions should be read to the whole class, and each pupil taught to be in readiness, in whatever order called upon, to give promptly the solution required.

The solutions should be uniformly according to such forms as are deemed by the teacher the neatest and best. The greatest care should be observed to have them always expressed in language entirely accurate, and pronounced in a clear and distinct manner.

Frequent reviews, especially of the tables, will alone give thoroughness. In general, with a lesson in advance, it will be advantageous to assign some portion previously gone over, as a review.

Every term, or process, connected with any of the lessons, which the beginner may be likely not readily to understand, the intelligent teacher will not need to be reminded, should be clearly explained to the pupil, before assigning the lesson.

NEW PRIMARY ARITHMETIC.



LESSON I.

How many thumbs have you on each hand?

How many hands have you? How many eyes?

If you wish to know how many fingers you have, what must you do? I must count them.

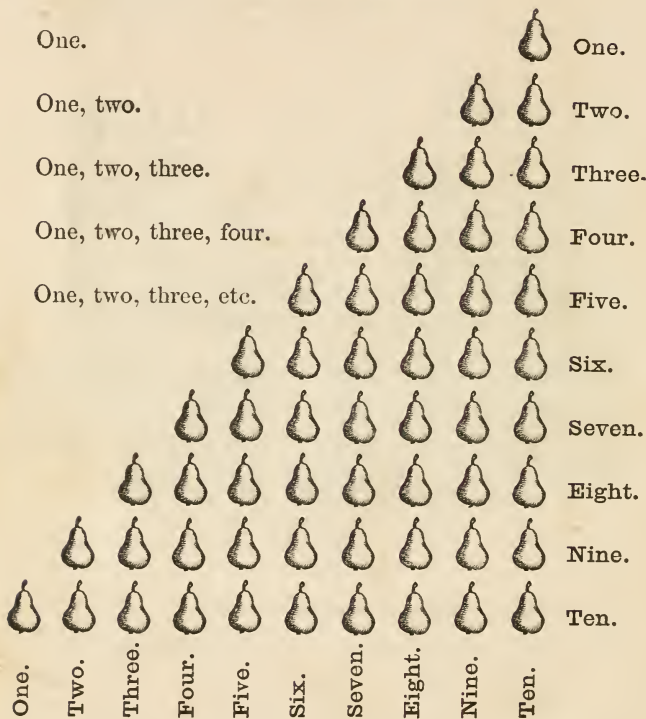
What, then, is counting? **Counting** is finding how many there are of things.

In counting, what is a single thing called? **One.**

What is a number? A **Number** is one, or more than one.

LESSON II.

Count the pears in each row, from left to right, and tell the number.

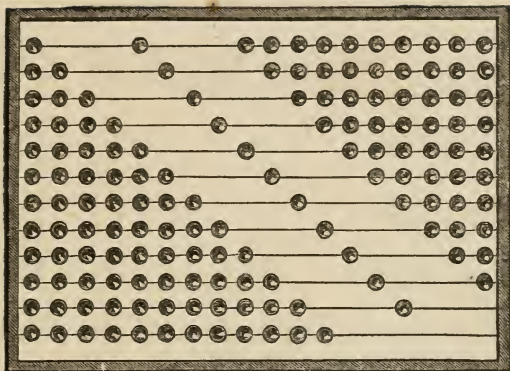


Count the pears in each row, from the top downward.

How many pears are there in the second row from the top?

How many pears are there in the next to the lowest row?

LESSON III.



Answer the following questions by counting the balls in the picture of the Numeral Frame:—

How many balls are one ball and one ball?

How many balls are two balls and one ball?

How many balls are three balls and one ball?

How many balls are four balls and one ball?

How many balls are five balls and one ball?

How many balls are six balls and one ball?

How many balls are seven balls and one ball?

How many balls are eight balls and one ball?

How many balls are nine balls and one ball?

Count from one to five. From two to six.

Count from one to seven. From three to seven.

Count from seven to ten. From one to ten.

LESSON IV.

Count ten books. Count ten chickens.



What do one, two, three, etc., express? **Numbers.**

How, then, can you express numbers? **By words.**

What is another method of expressing numbers? By certain marks called **Figures.**

How many different figures are used in expressing numbers? **Ten.**

Make on the slate the figure 1 for one; 2 for two, 3 for three; 4 for four; 5 for five.

Make on the slate the figure 6 for six; 7 for seven; 8 for eight; 9 for nine.

Make on the slate 0 for no number.

What is the 0 called? **Cipher, Zero, or Naught.**

Write on the slate and read the following figures:—

2, 3, 6, 7, 0, 4.

Write on the slate and read the following figures:—

8, 9, 1, 0, 5, 6.

What is one of any kind called? **A Unit.**

How many ones or units are one ten? **Ten.**

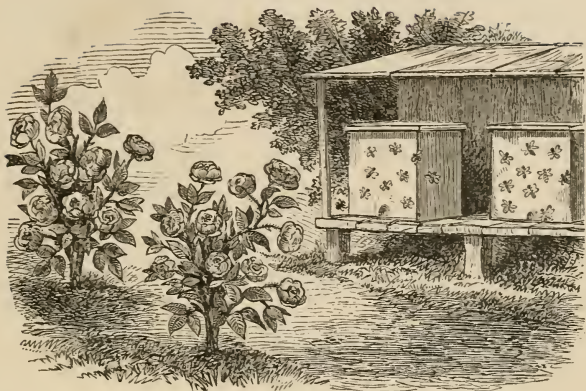
How can you express one ten by figures? By writing the figure 1 with 0 on the right; thus, **10.**

For what, then, does the figure 1, with 0 at the right, stand? **One ten, or ten.**

Write on the slate and read, —

9, 8, 7, 10, 6, 3.

LESSON V.



1. Here is a picture of some bees; count the number of bees about each hive.

2. How many bees are there about both hives?

3. If there are ten bees about each hive, and twenty about both, how many, then, are two tens?

4. How can you express twenty by figures? By writing the figure 2 with 0 on the right; thus, 20.

5. How many roses are ten roses and one rose?

6. Make the figures 11 for eleven; 12 for twelve; 13 for thirteen; 14 for fourteen; 15 for fifteen.

7. How many are fourteen and one? fifteen and one? sixteen and one? seventeen and one? eighteen and one? nineteen and one?

8. Make the figures 16 for sixteen; 17 for seventeen; 18 for eighteen; 19 for nineteen.

9. Write and read the following figures:—

11, 13, 17, 14, 19, 18.

LESSON VI.

1. 1 horse and 1 horse are how many horses?

How many are 1 and 1?



2. 1 vessel and 2 vessels are how many vessels?

How many are 1 and 2?



3. A cat caught 1 mouse in the cellar and 3 mice in the pantry. How many mice did she catch in all?



4. Jane put 1 cup on the table, and her sister put on 4 more. How many cups did they both put on the table?

How many are 1 and 4?



5. John set out 1 tree, and James set out 5. How many did they both set?

How many are 1 and 5?





6. Here is a picture of some acorns. How many acorns are 1 acorn and 6 acorns?

How many are 1 and 6?

7. Henry has 1 acorn and Edward has 7. How many acorns have they both?

How many are 1 and 7?

8. Ellen and 8 other girls are at play. How many girls are at play?

How many are 1 and 8?



9. 1 snow-bird and 9 yellow-birds are sitting on a branch. How many birds are there in all?

How many are 1 and 9?



10. Recite the table:—

1 and 1 are 2.	1 and 6 are 7.
1 and 2 are 3.	1 and 7 are 8.
1 and 3 are 4.	1 and 8 are 9.
1 and 4 are 5.	1 and 9 are 10.
1 and 5 are 6.	1 and 10 are 11.

LESSON VII.

1. George had 2 clusters of grapes, and his father gave him another. How many clusters had he then?

How many are 2 and 1?



2. In one yard there are 2 pigs, and in another there are 2. How many pigs are in both yards?

How many are 2 and 2?



3. 2 baskets and 3 baskets are how many?

How many are 2 and 3?



4. A merchant sold 2 pitchers at one time, and 4 pitchers at another time. How many did he sell in all?

How many are 2 and 4?



5. 2 apples and 5 apples are how many?

How many are 2 and 5?



6. Edwin has 2 tops, and George has 6. How many have they both?

How many are 2 and 6?



7. 2 flowers and 7 flowers are how many flowers?

How many are 2 and 7?



8. How many are 2 parasols and 8 parasols?

How many are 2 and 8?



9. How many are 2 soldiers and 9 soldiers?

How many are 2 and 9?



10. Recite the table:—

2 and 1 are 3.	2 and 6 are 8.
2 and 2 are 4.	2 and 7 are 9.
2 and 3 are 5.	2 and 8 are 10.
2 and 4 are 6.	2 and 9 are 11.
2 and 5 are 7.	2 and 10 are 12.

LESSON VIII.

1. Arthur had 3 lambs, and his brother gave him 1 more. How many lambs had he then?

How many are 3 and 1?



2. 3 sloops began to sail on the lake, and soon after 3 more. How many were then sailing?

How many are 3 and 3?



3. 3 tumblers and 5 tumblers are how many tumblers?

How many are 3 and 5?



4. 3 bees and 7 bees are how many bees?

How many are 3 and 7?



5. Recite the table:—

3 and 1 are 4.	3 and 6 are 9.
3 and 2 are 5.	3 and 7 are 10.
3 and 3 are 6.	3 and 8 are 11.
3 and 4 are 7.	3 and 9 are 12.
3 and 5 are 8.	3 and 10 are 13.

LESSON IX.

1. 4 rabbits are in one place, and 2 in another. How many in all?

How many are 4 and 2?



2. Frank has 4 pears, and Charles has 4 more. How many pears have both?

How many are 4 and 4?



3. 4 locks and 5 locks are how many locks?

How many are 4 and 5?



4. Henry has 4 flags, and Charles has 6. How many flags have both?

How many are 4 and 6?



5. Recite the table:—

4 and 1 are 5.	4 and 6 are 10.
4 and 2 are 6.	4 and 7 are 11.
4 and 3 are 7.	4 and 8 are 12.
4 and 4 are 8.	4 and 9 are 13.
4 and 5 are 9.	4 and 10 are 14.

LESSON X.



1. James has caught 5 trouts. If he should catch 1 more, how many trouts would he have caught?

How many are 5 and 1?

2. Five trouts and 2 trouts are how many trouts?

How many are 5 and 2?

3. How many peaches are 5 peaches and 4 peaches?

How many are 5 and 4?

4. There are 5 peaches in one plate and 6 in another. How many are there in both?

How many are 5 and 6?



5. There are 5 peaches in one plate and 7 in another. How many are there in both?

How many are 5 and 7?

6. Recite the table:—

5 and 1 are 6.

5 and 2 are 7.

5 and 3 are 8.

5 and 4 are 9.

5 and 5 are 10.

5 and 6 are 11.

5 and 7 are 12.

5 and 8 are 13.

5 and 9 are 14.

5 and 10 are 15.

LESSON XI.

1. Six girls and 2 girls are how many girls?

How many are 6 and 2?



2. John caught 6 fishes, and Daniel caught 5 fishes.
How many fishes did both catch?

How many are 6 and 5?

3. In one place there are 6 birds and in another 10.

How many are there in both places?



How many are 6 and 10?

4. Recite the table:—

6 and 1 are 7.	6 and 6 are 12.
6 and 2 are 8.	6 and 7 are 13.
6 and 3 are 9.	6 and 8 are 14.
6 and 4 are 10.	6 and 9 are 15.
6 and 5 are 11.	6 and 10 are 16.

WRITTEN EXERCISES.

Write and read:—

(5.)	(6.)	(7.)	(8.)	(9.)	(10.)
6	11	10	3	16	7
9	16	17	0	14	5
8	12	13	2	15	0
1	20	19	4	18	9

LESSON XII.

1. How many bees are 7 bees and 2 bees?



How many are 7 and 2?



2. How many bees are 7 bees and 4 bees? How many are 7 and 4?

3. Recite the table:—

7 and 1 are 8.	7 and 6 are 13.
7 and 2 are 9.	7 and 7 are 14.
7 and 3 are 10.	7 and 8 are 15.
7 and 4 are 11.	7 and 9 are 16.
7 and 5 are 12.	7 and 10 are 17.

LESSON XIII.



1. Albert paid 8 dollars for a globe, and 3 dollars for taking lessons on it. How much did he pay in all?

How many are 8 and 3?

2. Paid 8 dollars for a table, and 9 dollars for some chairs. How many dollars did both cost?

How many are 8 and 9?

3. Recite the table:—

8 and 1 are 9.	8 and 6 are 14.
8 and 2 are 10.	8 and 7 are 15.
8 and 3 are 11.	8 and 8 are 16.
8 and 4 are 12.	8 and 9 are 17.
8 and 5 are 13.	8 and 10 are 18.

LESSON XIV.



1. Rufus one day rode 9 miles, and the next day 7 miles. How many miles did he ride both days?

How many are 9 and 7?

2. Susan found on one rose-bush 9 roses, and on another 10 roses. How many did she find on both bushes?

How many are 9 and 10?

3. Recite the table:—

9 and 1 are 10.

9 and 2 are 11.

9 and 3 are 12.

9 and 4 are 13.

9 and 5 are 14.

9 and 6 are 15.

9 and 7 are 16.

9 and 8 are 17.

9 and 9 are 18.

9 and 10 are 19.

LESSON XV.



1. Alice saw 10 butterflies in the forenoon, and 6 in the afternoon. How many butterflies did she see in all?

2. Edwin had 10 marbles, and bought 10 more. How many then had he?

3. Recite the table:—

10 and 1 are 11.

10 and 2 are 12.

10 and 3 are 13.

10 and 4 are 14.

10 and 5 are 15.

10 and 6 are 16.

10 and 7 are 17.

10 and 8 are 18.

10 and 9 are 19.

10 and 10 are 20.

LESSON XVI.

1. How many are 2 and 5? 3 and 5?
2. How many are 4 and 7? 7 and 4?
3. How many are 5 and 6? 6 and 5?
4. How many are 8 and 2? 9 and 1?
5. How many are 10 and 4? Why 14?

Ans. *Because 10 and 4 make 14.*

6. A car containing 7 persons took in 5 more. How many did the car then contain? Why?

7. How many peaches are 9 peaches and 8 peaches? Why?

8. What is the finding of a number equal to two more numbers called? **Addition.**

9. What is the number which is equal to two or more numbers called? **Their Sum.**

10. What is the sum of 4 and 3? Of 7 and 5?

11. What is the sum of 5 and 4? Of 6 and 2?

12. Add 4 and 3. 5 and 4. 7 and 6.

WRITTEN EXERCISES.

Write and add:—

(13.)	(14.)	(15.)	(16.)	(17.)	(18.)
5	7	4	9	6	14
2	1	3	1	3	3
Sum, 7			10		17
(19.)	(20.)	(21.)	(22.)	(23.)	(24.)
6	9	7	8	5	13
1	0	5	3	6	4

LESSON XVII.



1. 2 pigs are eating their supper, and 1 has had his and gone away. How many pigs are there in all?

2. How many are 3 and 0? 3 and 6? 3 and 3? 3 and 5? 3 and 8?

3. How many are 4 and 4? 4 and 5? 4 and 7? 4 and 6? 4 and 10?

4. How many are 5 and 5? 5 and 1? 5 and 2? 5 and 8? 5 and 6?

5. How many are 6 and 1? 6 and 2? 6 and 7? 6 and 8? 6 and 9?

6. How many are 7 and 2? 7 and 0? 7 and 3? 7 and 5? 7 and 8? 7 and 10?

7. How many are 8 and 1? 8 and 2? 8 and 4? 8 and 8? 8 and 10?

8. How many are 9 and 3? 9 and 5? 9 and 8? 9 and 7? 9 and 6? 9 and 10?

9. How many are 10 and 0? 10 and 1? 10 and 2? 10 and 5? 10 and 10?

10. Levi had 6 cents, and his father gave him 6 more. How many cents then had he? Why?

11. Charles has in one pocket 7 chestnuts, and in the other 9 more. How many has he in both?

12. In a park there were seen 4 squirrels running on the ground, and 10 on the trees. How many squirrels were there in all?



LESSON XVIII.

1. Here is a picture of a lively scene. See what a collection of birds, both on the ground and on the fence. Count and tell how many there are on the ground.

2. Count and tell how many there are on one of the rails.

3. Count and tell how many there are on the two rails.

4. Count and tell how many there are on the ground and on one of the rails.

5. Count and tell how many there are on the ground and on both rails.

6. How can you express thirty by figures? By writing the figure 3 with 0 on the right of it; thus, 30.

7. What, then, does the figure 3, with 0 on its right, represent? Three tens, or thirty.

8. Write the figures which stand for thirty.

9. How can you express thirty-two by figures? By writing 3 and 2, side by side; thus, 32.

10. What do the figures thus written express?
Three tens and two, or thirty-two.

11. Write the figures which stand for thirty-two.

12. How can you express thirty-three by figures? By writing 3 and 3, side by side; thus, 33.

13. What do the figures thus written express?
Three tens and three, or thirty-three.

14. Write the figures which stand for thirty-three.

15. How can you express forty by figures? By writing 4 and 0, side by side; thus, 40.

16. What do the figures thus written express?
Four tens and no ones or units, or forty.

17. Write the figures which stand for forty.

18. Write and read the figures of the following table:—

Number.	Printed figures.	Written figures.	Number.	Printed figures.	Written figures.
Twenty-one,	21	21	Thirty-one,	31	31
Twenty-two,	22	22	Thirty-two,	32	32
Twenty-three,	23	23	Thirty-three,	33	33
Twenty-four,	24	24	Thirty-four,	34	34
Twenty-five,	25	25	Thirty-five,	35	35
Twenty-six,	26	26	Thirty-six,	36	36
Twenty-seven,	27	27	Thirty-seven,	37	37
Twenty-eight,	28	28	Thirty-eight,	38	38
Twenty-nine,	29	29	Thirty-nine,	39	39
Thirty,	30	30	Forty,	40	40

LESSON XIX.



1. Two ducks were standing near a pool; but 1 of them has gone into it. How many remain out of the pool?

1 from 2 leaves how many?

2. Farmer Jones had 3 wheelbarrows, but has sold 1. How many has he left?

1 from 3 leaves how many?



3. Mary had 4 walnuts, but has given her sister 1. How many has she left?

1 from 4 leaves how many?



4. There are 5 pitchers upon a table; 1 of them contains milk, and the others water. How many contain water?

1 from 5 leaves how many?



5. There are 6 flowers; 1 of them is a tulip, and the others are pinks. How many are pinks?



6. A merchant had 7 chests of tea, but has sold 1 chest. How many chests has he left?

1 from 7 leaves how many?



7. Lucy had 8 flowers, but has given 1 of them to her sister. How many has Lucy left?

1 from 8 leaves how many?



8. 9 flags were standing in a row, but 1 has been taken away. How many flags remain?

1 from 9 leaves how many?



9. John has 10 chickens. If he should sell 1 of them, how many would he have left?

1 from 10 leaves how many?



10. Recite the table:—

1 from 1 leaves 0.	1 from 6 leaves 5.
1 from 2 leaves 1.	1 from 7 leaves 6.
1 from 3 leaves 2.	1 from 8 leaves 7.
1 from 4 leaves 3.	1 from 9 leaves 8.
1 from 5 leaves 4.	1 from 10 leaves 9.

LESSON XX.



1. George found 3 eggs in a nest, and took away 2 of them. How many did he leave?

2. Two eggs from 6 eggs leaves how many? Two eggs and how many eggs are 6 eggs?

3. Two from 8 leaves how many? Two from 9 leaves how many?

4. Recite the table:—

2 from 2 leaves 0.	2 from 7 leaves 5.
2 from 3 leaves 1.	2 from 8 leaves 6.
2 from 4 leaves 2.	2 from 9 leaves 7.
2 from 5 leaves 3.	2 from 10 leaves 8.
2 from 6 leaves 4.	2 from 11 leaves 9.

WRITTEN EXERCISES.

Write and read:—

(5.)	(6.)	(7.)	(8.)	(9.)	(10.)
22	21	25	37	23	24
31	39	28	22	26	29
32	40	36	27	20	33
(11.)	(12.)	(13.)	(14.)	(15.)	(16.)
30	39	17	25	18	21
38	22	26	13	27	38
34	19	35	11	19	40

LESSON XXI.



1. Six squirrels less 3 squirrels are how many?

2. Eight ships were at sea, and 3 of them were lost in a storm. How many were left?

3. Recite the table:—

3 from 3 leaves 0.

3 from 4 leaves 1.

3 from 5 leaves 2.

3 from 6 leaves 3.

3 from 7 leaves 4.

3 from 8 leaves 5.

3 from 9 leaves 6.

3 from 10 leaves 7.

3 from 11 leaves 8.

3 from 12 leaves 9.

LESSON XXII.



1. Four flowers from 7 flowers leave how many?

2. Ten chickens less 4 chickens are how many?



Recite the table:—

4 from 4 leaves 0.

4 from 5 leaves 1.

4 from 6 leaves 2.

4 from 7 leaves 3.

4 from 8 leaves 4.

4 from 9 leaves 5.

4 from 10 leaves 6.

4 from 11 leaves 7.

4 from 12 leaves 8.

4 from 13 leaves 9.

LESSON XXIII.

1. A boy had 6 rabbits, and lost 2 of them. How many had he left?



2. Laura had 9 sheets of paper, but has used 5 of them in writing letters. How many sheets has she left?

Recite the table:—

5 from 5 leaves 0.	5 from 10 leaves 5.
5 from 6 leaves 1.	5 from 11 leaves 6.
5 from 7 leaves 2.	5 from 12 leaves 7.
5 from 8 leaves 3.	5 from 13 leaves 8.
5 from 9 leaves 4.	5 from 14 leaves 9.

LESSON XXIV.



1. Ten peaches were upon a table, but 6 of them have been put in a plate. How many remain on the table?

2. In two plates are 13 peaches, but in one of the plates are 6. How many are there in the other plate?

3. Recite the table:—

6 from 6 leaves 0.	6 from 11 leaves 5.
6 from 7 leaves 1.	6 from 12 leaves 6.
6 from 8 leaves 2.	6 from 13 leaves 7.
6 from 9 leaves 3.	6 from 14 leaves 8.
6 from 10 leaves 4.	6 from 15 leaves 9.

LESSON XXV.

Recite the table:—

7 from 7 leaves 0.	7 from 12 leaves 5.
7 from 8 leaves 1.	7 from 13 leaves 6.
7 from 9 leaves 2.	7 from 14 leaves 7.
7 from 10 leaves 3.	7 from 15 leaves 8.
7 from 11 leaves 4.	7 from 16 leaves 9.

1. Emma bought a muff for 13 dollars, and sold it
 for 7 dollars. How much did she lose?

7 from 13 leaves how many?

2. Eliza planted 16 seeds, but only 7 came up. How
 many seeds failed to come up?

7 from 16 leaves how many?

LESSON XXVI.

Recite the table:—

8 from 8 leaves 0.	8 from 13 leaves 5.
8 from 9 leaves 1.	8 from 14 leaves 6.
8 from 10 leaves 2.	8 from 15 leaves 7.
8 from 11 leaves 3.	8 from 16 leaves 8.
8 from 12 leaves 4.	8 from 17 leaves 9.

1. William earned 8 dollars, but paid them all away
 for a dog. How many dollars had he then
 left?



8 from 8 leaves how many?

2. Robert caught 11 squirrels, but 8 of them ran
 away. How many remained?

LESSON XXVII.

1. Recite the table:—

9 from 9 leaves 0.	9 from 14 leaves 5.
9 from 10 leaves 1.	9 from 15 leaves 6.
9 from 11 leaves 2.	9 from 16 leaves 7.
9 from 12 leaves 3.	9 from 17 leaves 8.
9 from 13 leaves 4.	9 from 18 leaves 9.

2. Julia rode at one time 15 miles, and at another time 9 miles. How many more miles did she ride at the one time than at the other?

from 10 leaves how many?

3. From a chest of tea that contained 18 pounds there have been sold 9 pounds. How many pounds remain unsold?

LESSON XXVIII.

1. Recite the table:—

10 from 10 leaves 0.	10 from 15 leaves 5.
10 from 11 leaves 1.	10 from 16 leaves 6.
10 from 12 leaves 2.	10 from 17 leaves 7.
10 from 13 leaves 3.	10 from 18 leaves 8.
10 from 14 leaves 4.	10 from 19 leaves 9.



2. A man sold bird cages, that cost him 15 dollars, for 10 dollars. How many dollars did he lose?

10 from 15 leaves how many?

3. A farmer has 17 sheep and 10 lambs. How many more sheep has he than lambs?



LESSON XXIX.

1. The children represented in the picture are engaged in play, during recess. In one group are 16 children; in the other there are 10. How many more are there in the one group than in the other?

2. In one group there are 9 girls and 7 boys. How many more girls are there than boys?

3. How many are 8 less 1? 10 less 3?
4. How many are 6 less 2? 12 less 4?
5. How many are 11 less 5? 14 less 8?
6. How many are 19 less 10? 10 less 9?
7. How many are 17 less 10? 13 less 7?
8. How many are 16 less 8? 15 less 6?
9. How many are 14 less 9? 16 less 7?
10. How many are 17 less 7? 15 less 6?
11. How many are 19 less 8? 17 less 9?

LESSON XXX.



1. From a brood of 16 chickens 9 have been carried away by a hawk. How many remain? Why?

Ans. Because 9 taken from 16 leaves 7.

2. Lucy had 11 books, but has given 10 of them away. How many has she left? Why?

3. A lady had in her purse 13 dollars, but has spent 7 of them. How many dollars has she left? Why?

4. What is the taking of one number from another called? **Subtraction.**

5. What is that left after taking one number from another called? **Their Difference.**

6. What is the difference between 13 and 7? 9 and 2? 15 and 8? 16 and 9?

7. What is the difference between 13 and 6? 14 and 7? 16 and 6? 17 and 9?

WRITTEN EXERCISES.

Write and subtract:—

(8.)	(9.)	(10.)	(11.)	(12.)	(13.)	(14.)	(15.)
8	9	7	6	9	8	8	9
5	4	3	2	7	1	3	5
—	—	—	—	—	—	—	—
<i>Difference, 3</i>							
(16.)	(17.)	(18.)	(19.)	(20.)	(21.)	(22.)	(23.)
4	5	9	7	8	9	7	9
2	3	8	6	8	3	2	9
—	—	—	—	—	—	—	—

LESSON XXXI.

1. There were 6 butterflies on the ground, but 5 have flown away. How many remain?



Five from 6 leaves how many?

Five and how many are 6?

2. Two from 2 leaves how many? 2 from 6? 2 from 4? 2 from 10?

3. Three from 4 leaves how many? 3

from 5? 3 from 10? 3 from 9?

4. Four from 7 leaves how many? 4 from 8? 4 from 9? 4 from 5?

5. Five from 9 leaves how many? 5 from 6? 5 from 7? 5 from 8? 5 from 10?

6. Six from 7 leaves how many? 6 from 8? 6 from 9? 6 from 11? 6 from 12?

7. Seven from 8 leaves how many? 7 from 13? 8 from 15? 8 from 17? 10 from 16?

8. Andrew is 19 years old, and Jason is 10. How much older is Andrew than Jason?

9. Mary has 15 cents, and Lucy 9. How many have both?

Nine from 15 leaves how many?

LESSON XXXII.

1. Count from one to forty. Write the figures, which express forty. 40.

2. Count from forty to fifty. Write the figures, which express fifty. 50.

3. Count from fifty to sixty. Write the figures, which express sixty. 60.

4. Count from sixty to seventy. Write the figures, which express seventy. 70.

5. Write and read the figures of the table:—

Number.	Printed figures.	Written figures.	Number.	Printed figures.	Written figures.
Forty-one,	41	41	Fifty-six,	56	56
Forty-two,	42	42	Fifty-seven,	57	57
Forty-three,	43	43	Fifty-eight,	58	58
Forty-four,	44	44	Fifty-nine,	59	59
Forty-five,	45	45	Sixty,	60	60
Forty-six,	46	46	Sixty-one,	61	61
Forty-seven,	47	47	Sixty-two,	62	62
Forty-eight,	48	48	Sixty-three,	63	63
Forty-nine,	49	49	Sixty-four,	64	64
Fifty,	50	50	Sixty-five,	65	65
Fifty-one,	51	51	Sixty-six,	66	66
Fifty-two,	52	52	Sixty-seven,	67	67
Fifty-three,	53	53	Sixty-eight,	68	68
Fifty-four,	54	54	Sixty-nine,	69	69
Fifty-five,	55	55	Seventy,	70	70

LESSON XXXIII.

1. Count from one to seventy. Write the figures, which express seventy. *70.*

2. Count from seventy to eighty. Write the figures, which express eighty. *80.*

3. Count from eighty to ninety. Write the figures, which express ninety. *90.*

4. Count from ninety to one hundred. Write the figures, which express one hundred. *100.*

5. Write and read the figures of the table:—

Number.	Printed figures.	Written figures.	Number.	Printed figures.	Written figures.
Seventy-one,	71	71	Eighty-six,	86	86
Seventy-two,	72	72	Eighty-seven,	87	87
Seventy-three,	73	73	Eighty-eight,	88	88
Seventy-four,	74	74	Eighty-nine,	89	89
Seventy-five,	75	75	Ninety,	90	90
Seventy-six,	76	76	Ninety-one,	91	91
Seventy-seven,	77	77	Ninety-two,	92	92
Seventy-eight,	78	78	Ninety-three,	93	93
Seventy-nine,	79	79	Ninety-four,	94	94
Eighty,	80	80	Ninety-five,	95	95
Eighty-one,	81	81	Ninety-six,	96	96
Eighty-two,	82	82	Ninety-seven,	97	97
Eighty-three,	83	83	Ninety-eight,	98	98
Eighty-four,	84	84	Ninety-nine,	99	99
Eighty-five,	85	85	One Hundred,	100	100

LESSON XXXIV.

1. If John should see 1 vessel every time he should go down to the sea-side, how many would he see on going down to the sea-side twice?



2. If a cabinet-maker can finish 1 table in a day, how many tables can he finish in 3 days?

3 times 1 table are how many tables?



3. 5 times 1 tree are how many trees?



4. 1 turkey was taken from a poultry-yard every night for 6 nights. How many were taken in all?

6 times 1 turkey are how many turkeys?



5. Recite the table:—

Once 1 is 1.	6 times 1 are 6.
2 times 1 are 2.	7 times 1 are 7.
3 times 1 are 3.	8 times 1 are 8.
4 times 1 are 4.	9 times 1 are 9.
5 times 1 are 5.	10 times 1 are 10.

LESSON XXXV.

1. If 1 butterfly has 2 wings, how many wings have 2 butterflies?

2 times 2 are how many?



2. 3 pairs of skates are how many skates?

3 times 2 are how many?



3. A boy has 2 hands. How many hands have 4 boys?

4 times 2 are how many?



4. A merchant sold 2 umbrellas every day for 7 days. How many umbrellas did he sell?

7 times 2 are how many?



5. Recite the table:—

Once 2 is 2.	6 times 2 are 12.
2 times 2 are 4.	7 times 2 are 14.
3 times 2 are 6.	8 times 2 are 16.
4 times 2 are 8.	9 times 2 are 18.
5 times 2 are 10.	10 times 2 are 20.

LESSON XXXVI.

1. How many cherries in 2 clusters of 3 cherries each?



2. How many marbles are 5 times 3 marbles?



3. Recite the table:—

Once 3 is 3.	6 times 3 are 18.
2 times 3 are 6.	7 times 3 are 21.
3 times 3 are 9	8 times 3 are 24.
4 times 3 are 12	9 times 3 are 27.
5 times 3 are 15.	10 times 3 are 30.

WRITTEN EXERCISES.

Write and read:—

(4.)	(5.)	(6.)	(7.)	(8.)
6	23	61	16	76
8	44	77	43	67
10	55	34	32	17
12	61	43	17	53
(9.)	(10.)	(11.)	(12.)	(13.)
86	9	11	33	91
19	25	45	47	12
22	54	78	5	21
76	63	49	73	82

LESSON XXXVII.

1. Recite the table:—

Once 4 is 4.	6 times 4 are 24.
2 times 4 are 8.	7 times 4 are 28.
3 times 4 are 12.	8 times 4 are 32.
4 times 4 are 16.	9 times 4 are 36.
5 times 4 are 20.	10 times 4 are 40.

2. If a cat can catch 4 mice in 1 day, how many can she catch in 4 days?

4 times 4 are how many?



3. At 4 cents each, what will cost 6 pencils?

LESSON XXXVIII.

1. Recite the table:—

Once 5 is 5.	6 times 5 are 30.
2 times 5 are 10.	7 times 5 are 35.
3 times 5 are 15.	8 times 5 are 40.
4 times 5 are 20.	9 times 5 are 45.
5 times 5 are 25.	10 times 5 are 50.



2. When 1 vase costs 5 dollars, how many dollars must be paid for 3 vases?

3 times 5 are how many?

3. If a boat will sail 5 miles in 1 hour.

How far will it sail in 6 hours?

6 times 5 are how many?

LESSON XXXIX.

1. Recite the table:—

Once 6 is 6.	6 times 6 are 36.
2 times 6 are 12.	7 times 6 are 42.
3 times 6 are 18.	8 times 6 are 48.
4 times 6 are 24.	9 times 6 are 54.
5 times 6 are 30.	10 times 6 are 60.



2. In a garden there are 6 rose-bushes, and on each bush there are 2 roses. How many roses are there in all?

2 times 6 are how many?

3. If 1 barrel of flour cost 6 dollars, how many dollars will 9 barrels cost?

9 times 6 are how many?

LESSON XL.

1. Recite the table:—

Once 7 is 7.	6 times 7 are 42.
2 times 7 are 14.	7 times 7 are 49.
3 times 7 are 21.	8 times 7 are 56.
4 times 7 are 28.	9 times 7 are 63.
5 times 7 are 35.	10 times 7 are 70.



2. When 7 cents are paid for 1 dove, how many cents must be paid for 5 doves?

3. If 1 basket will contain 7 apples, how many apples will 8 baskets contain?

8 times 7 are how many?

LESSON XLI.

1. Recite the table:—

Once 8 is 8.	6 times 8 are 48.
2 times 8 are 16.	7 times 8 are 56.
3 times 8 are 24.	8 times 8 are 64.
4 times 8 are 32.	9 times 8 are 72.
5 times 8 are 40.	10 times 8 are 80.



2. If 8 bales will make 1 load, how many bales will make 6 loads?

6 times 8 are how many?

3. If it take 9 men to row 1 boat, how many will it take to row 8 boats?

LESSON XLII.

1. Recite the table:—

Once 9 is 9.	6 times 9 are 54.
2 times 9 are 18.	7 times 9 are 63.
3 times 9 are 27.	8 times 9 are 72.
4 times 9 are 36.	9 times 9 are 81.
5 times 9 are 45.	10 times 9 are 90.



2. When 9 cents are paid for 1 cluster of grapes, how many cents must be paid for 3 clusters?

3 times 9 are how many?

3. At 9 cents a pound, what will 10 pounds of sugar cost?

LESSON XLIII.

1. Recite the table:—

Once 10 is 10.	6 times 10 are 60.
2 times 10 are 20.	7 times 10 are 70.
3 times 10 are 30.	8 times 10 are 80.
4 times 10 are 40.	9 times 10 are 90.
5 times 10 are 50.	10 times 10 are 100.

2. If a house have 10 windows in front, how many windows in front will 4 houses of the same kind have?

4 times 10 are how many?

3. If a writing-book cost 10 cents, what will 9 writing-books cost?

9 times 10 are how many?

WRITTEN EXERCISES.

Write and add:—

(4.)	(5.)	(6.)	(7.)	(8.)	(9.)
2	3	4	3	5	7
2	2	3	3	1	1
1	1	2	1	3	1
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Sum, 5					
(10.)	(11.)	(12.)	(13.)	(14.)	(15.)
6	7	8	9	5	8
3	4	5	3	6	6
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
(16.)	(17.)	(18.)	(19.)	(20.)	(21.)
14	17	10	31	43	16
4	2	12	37	26	30
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>



LESSON XLIV.

1. Three dogs while hunting caught 4 rabbits each.
How many rabbits did they catch in all?

3 times 4 are how many?

2. What will 2 lemons cost, at 2 cents apiece?

2 times 2 are how many?

3. At 5 cents apiece, what will 7 oranges cost?

5 times 7 are how many?

4. Joseph went a fishing 6 times, and caught 3 fishes
each time. How many fishes did he catch?

3 times 6 are how many?

5. What will 4 sheep cost, at 3 dollars each?

4 times 3 are how many?

6. What will 6 tops cost, at 7 cents apiece?

6 times 7 are how many?

LESSON XLV.



1. If a cow give 6 quarts of milk a day, how many quarts of milk will she give in 8 days?

6 times 8 are how many?

2. Emily bought 10 combs, at 10 cents apiece. How much did she pay for them?

10 times 10 are how many?

3. What will 7 barrels of vinegar cost, at 6 dollars each?

6 times 7 are how many?

4. At 9 cents a pound, what will 4 pounds of sugar cost?

9 times 4 are how many?

5. 8 times 6 are how many? 4 times 9?

LESSON XLVI.



1. What cost 4 plows, at 10 dollars apiece? Why 40 dollars?

ANS. Since one plow cost 10 dollars, 4 plows will cost 4 times 10 dollars, or 40 dollars.

2. Oliver bought 6 melons, at 9 cents each. How much did he pay for all? Why?

3. 5 pear-trees have on each of them 8 pears. How many pears are on them all? Why?

4. Caroline has 8 classmates, and she gave to each 2 apples. How many apples did she give them? Why?

5. What is the cost of 7 hats, at 3 dollars apiece? Why?

LESSON XLVII.



1. If 1 ball cost 9 cents, what will 5 balls cost? Why?

How many cents are 5 times 9 cents?

2. What is the cost of 4 pairs of boots, at 4 dollars a pair? Why?

How many dollars are 4 times 4 dollars? Why?

3. If a man can make 6 pairs of shoes in a day, how many pairs can he make in 6 days? Why?

4. What is the cost of 8 pounds of sugar, at 10 cents a pound? Why?

5. Bought 9 cords of wood, at 7 dollars a cord. What was the cost? Why?

6. What is the cost of 5 pounds of cheese, at 10 cents a pound? Why?

7. If James earns 8 dollars in 1 month, how many dollars will he earn in 10 months?

8. How many dollars are 8 times 8 dollars? Why?

9. What will 9 pounds of rice cost, at 10 cents a pound? Why?

10. What will 10 pounds of beef cost, at 10 cents a pound? Why?

LESSON XLVIII.

1. How many are 6 times 7? 4 times 3?
2. How many are 7 times 6? 3 times 4?
3. How many units or ones are 8 times 5?
4. How many units or ones are 9 taken 3 times?
How many are 9, 9, and 9?
5. What is a short way of taking a number a certain number of times called? **Multiplication.**
6. If 8 be multiplied by 5, what is the result?
7. If 6 be multiplied by 6, what is the result?
8. What is the result of the multiplication of one number by another called? **Their Product.**
9. What is the product of 7 by 3? Of 8 by 4?

WRITTEN EXERCISES.

Write and multiply:—

(10.)	(11.)	(12.)	(13.)	(14.)	(15.)
6	5	7	9	4	8
2	4	3	5	7	6

Product, 12

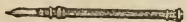
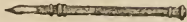
(16.)	(17.)	(18.)	(19.)	(20.)	(21.)
11	12	12	14	14	13
3	3	4	2	3	2

(22.)	(23.)	(24.)	(25.)	(26.)	(27.)
31	22	23	24	33	44
2	3	3	2	3	2

LESSON XLIX.

1. A father has given his 2 sons 4 gold pens. How many pens are there to each of the sons?

2 in 4 how many times?



2. A farmer has 6 pigs, which he wishes to put in pens that shall contain only 2 pigs each. How many pens must he have?



3. If it takes 2 skates to make a pair, how many pairs will 8 skates make?

2 in 8 how many times?



4. How many pairs of gloves are there in 10 gloves?

2 in 10 how many times?



5. Recite the table:—

2 in 2, once.

2 in 4, 2 times.

2 in 6, 3 times.

2 in 8, 4 times.

2 in 10, 5 times.

2 in 12, 6 times.

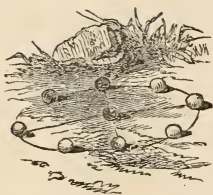
2 in 14, 7 times.

2 in 16, 8 times.

2 in 18, 9 times.

2 in 20, 10 times.

LESSON L.



1. Albert gave his 3 brothers 9 marbles, to be shared equally between them. How many did each receive?

2. How many times 3 marbles are 15 marbles?



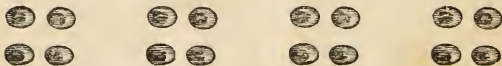
3. Recite the table:—

3 in 3, once.	3 in 18, 6 times.
3 in 6, 2 times.	3 in 21, 7 times.
3 in 9, 3 times.	3 in 24, 8 times.
3 in 12, 4 times.	3 in 27, 9 times.
3 in 15, 5 times.	3 in 30, 10 times.

LESSON LI.

1. Sixteen marbles are how many times 4 marbles?

4 in 16 how many times?



2. Recite the table:—

4 in 4, once.	4 in 24, 6 times.
4 in 8, 2 times.	4 in 28, 7 times.
4 in 12, 3 times.	4 in 32, 8 times.
4 in 16, 4 times.	4 in 36, 9 times.
4 in 20, 5 times.	4 in 40, 10 times.

LESSON LII.

1. Recite the table:—

5 in 5, once.	5 in 30, 6 times.
5 in 10, 2 times.	5 in 35, 7 times.
5 in 15, 3 times.	5 in 40, 8 times.
5 in 20, 4 times.	5 in 45, 9 times.
5 in 25, 5 times.	5 in 50, 10 times.



2. If 5 men are required to row one boat, how many boats can 30 men row?

5 in 30 how many times?

3. Thomas divided 45 peaches equally among 5 of his schoolmates. How many peaches did each receive?

5 in 45 how many times?

LESSON LIII.

1. Recite the table:—

6 in 6, once.	6 in 36, 6 times.
6 in 12, 2 times.	6 in 42, 7 times.
6 in 18, 3 times.	6 in 48, 8 times.
6 in 24, 4 times.	6 in 54, 9 times.
6 in 30, 5 times.	6 in 60, 10 times.



2. If one ear of corn is required to feed 6 chickens, how many ears of corn will it take to feed 42 chickens?

6 in 42 how many times?

3. At 6 cents each, how many melons can be bought for 24 cents?

6 in 24 how many times?

LESSON LIV.

1. Recite the table:—

7 in 7, once.	7 in 42, 6 times.
7 in 14, 2 times.	7 in 49, 7 times.
7 in 21, 3 times.	7 in 56, 8 times.
7 in 28, 4 times.	7 in 63, 9 times.
7 in 35, 5 times.	7 in 70, 10 times.



2. If 28 roses are divided equally between 7 children, how many will each receive?

4 in 28 how many times?

3. At 7 cents a pound, how many pounds of rice can be bought for 56 cents?

7 in 56 how many times?

WRITTEN EXERCISES.

Write and subtract:—

(4.) 14 4 —	(5.) 17 2 —	(6.) 10 2 —	(7.) 31 7 —	(8.) 43 26 —	(9.) 96 30 —
(10.) 17 4 —	(11.) 16 18 —	(12.) 17 8 —	(13.) 25 15 —	(14.) 42 19 —	(15.) 56 36 —
(16.) 40 20 —	(17.) 51 12 —	(18.) 21 13 —	(19.) 10 1 —	(20.) 42 24 —	(21.) 62 11 —

LESSON LV.

1. Recite the table:—

8 in 8, once.	8 in 48, 6 times.
8 in 16, 2 times.	8 in 56, 7 times.
8 in 24, 3 times.	8 in 64, 8 times.
8 in 32, 4 times.	8 in 72, 9 times.
8 in 40, 5 times.	8 in 80, 10 times.

2. If one quart of cherries cost 8 cents, how many quarts of cherries may be bought for 32 cents?

8 in 32 how many times?

3. Francis bought 8 writing-books for 80 cents. How much were the writing-books apiece?

8 in 80 how many times?

LESSON LVI.

1. Recite the table:—

9 in 9, once.	9 in 54, 6 times.
9 in 18, 2 times.	9 in 63, 7 times.
9 in 27, 3 times.	9 in 72, 8 times.
9 in 36, 4 times.	9 in 81, 9 times.
9 in 45, 5 times.	9 in 90, 10 times.

2. If a soldier can buy a gun for 9 dollars, how many guns can he buy for 18 dollars?

9 in 18 how many times?

3. If 9 dollars will buy a barrel of flour, how many barrels of flour can be bought for 63 dollars?

9 in 63 how many times?

LESSON LVII.

1. Recite the table:—

10 in 10, once.	10 in 60, 6 times.
10 in 20, 2 times.	10 in 70, 7 times.
10 in 30, 3 times.	10 in 80, 8 times.
10 in 40, 4 times.	10 in 90, 9 times.
10 in 50, 5 times.	10 in 100, 10 times.



2. When one fish costs 10 cents, how many fishes can be bought for 40 cents?

10 in 40 how many times?

3. At 10 cents a yard, how many yards of cloth can be bought for 90 cents?

10 in 90 how many times?

LESSON LVIII.



1. How many dogs, at 5 dollars each, can be bought for 25 dollars? Why?

Ans. Since 5 dollars will buy one dog, as many dogs can be bought for 25 dollars as 5 is contained times in 25, or 5. Therefore, at 5 dollars each, 5 dogs can be bought for 25 dollars.

2. How many toy-books, at 3 cents each, can be bought for 18 cents? Why?

3. How many marbles, at 1 cent apiece, can be bought for 9 cents? Why?

4. If 8 books cost 24 cents, what will 1 book cost? Why?

5. Arthur walked 36 miles in 9 days. How many miles did he walk each day? Why?

LESSON LIX.



1. A sportsman in shooting 6 times shot 30 ducks, killing the same number at each shot. How many ducks did he kill at a shot? Why?

2. At 7 cents a quart, how many quarts of nuts can be bought for 49 cents? Why?

3. At 10 cents a pound, how many pounds of sugar can be bought for 50 cents? Why?

4. Alfred gave 24 apples for 6 oranges. How many apples did he give for 1 orange? Why?

5. How many skeins of silk, at 5 cents a skein, can be bought for 35 cents? Why?

LESSON LX.

1. How many times 2 in 4? In 8? In 6? In 10? In 2?

2. How many times 3 in 9? In 6? In 12? In 15? In 27?

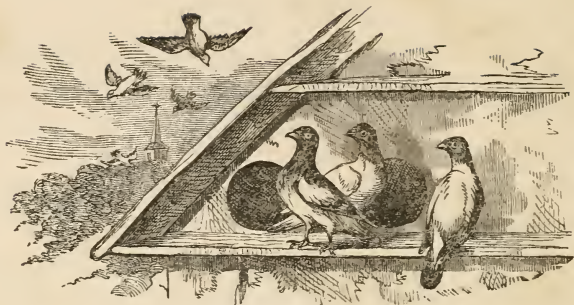
3. How many times 4 in 4? In 16? In 20? In 32? In 40?

4. How many times 5 in 10? In 25? In 30? In 40? In 5? In 50?

5. How many times 6 in 12? In 18? In 6? In 42? In 60?

6. How many times 7 in 14? In 21? In 35? In 49? In 63?

7. How many times 8 in 24? In 40? In 64? In 72?



LESSON LXI.

1. Edward had 7 doves, and sold 3 for 30 cents. How much did he get apiece for them?
2. How many times 9 in 18? In 36? In 54? In 45? In 9? In 63? In 90?
3. How many times 10 in 20? In 30? In 70? In 10? In 50? In 90? In 100?
4. How many times 2 in 18? In 12?
5. How many times 3 in 3? In 21?
6. How many times 5 in 35? In 45?
7. How many times 6 in 24? In 54?
8. How many times 8 in 32? In 80?
9. How many times 9 in 27? In 72?
10. How many times 10 in 40? In 70?
11. How many times 7 in 28? In 56?
12. How many times 8 in 64? In 72?
13. How many times 9 in 45? In 81?
14. How many times 10 in 80? 9 in 63?

LESSON LXII.

1. How many times are 4 cents contained in 24 cents?

2. How many times 6 in 24? 8 in 24?

3. What is the finding of the number of times one number is contained in another called? **Division.**

4. What is the result of 15 divided by 3? Of 21 divided by 7?

5. What is the result of the division of one number by another called? **The Quotient.**

6. What is the quotient of 30 divided by 5? Of 49 divided by 7?

7. How many times 4 dollars in 17 dollars, and how many dollars over?

8. What is the number which is sometimes left after dividing called? **The Remainder.**

9. Divide 63 days by 10, and what will be the remainder?

WRITTEN EXERCISES.

Write and divide:—

(10.)

$$\begin{array}{r} 2 \overline{) 8} \\ \hline \end{array}$$

(11.)

$$\begin{array}{r} 4 \overline{) 12} \\ \hline \end{array}$$

(12.)

$$\begin{array}{r} 3 \overline{) 18} \\ \hline \end{array}$$

(13.)

$$\begin{array}{r} 5 \overline{) 25} \\ \hline \end{array}$$

Quotient, 4

(14.)

$$\begin{array}{r} 3 \overline{) 36} \\ \hline \end{array}$$

(15.)

$$\begin{array}{r} 4 \overline{) 48} \\ \hline \end{array}$$

(16.)

$$\begin{array}{r} 3 \overline{) 69} \\ \hline \end{array}$$

(17.)

$$\begin{array}{r} 3 \overline{) 39} \\ \hline \end{array}$$

(18.)

$$\begin{array}{r} 4 \overline{) 44} \\ \hline \end{array}$$

(19.)

$$\begin{array}{r} 5 \overline{) 55} \\ \hline \end{array}$$

(20.)

$$\begin{array}{r} 6 \overline{) 42} \\ \hline \end{array}$$

(21.)

$$\begin{array}{r} 6 \overline{) 72} \\ \hline \end{array}$$

(22.)

$$\begin{array}{r} 7 \overline{) 84} \\ \hline \end{array}$$

(23.)

$$\begin{array}{r} 7 \overline{) 49} \\ \hline \end{array}$$

(24.)

$$\begin{array}{r} 6 \overline{) 36} \\ \hline \end{array}$$

(25.)

$$\begin{array}{r} 4 \overline{) 64} \\ \hline \end{array}$$



LESSON LXIII.

1. In a store-room 4 mice are on the shelves and 6 on the floor. How many in all? Why?

2. A man bought a load of wood for 6 dollars, and a barrel of flour for 9 dollars. How much did both cost?

3. In one field there are 5 oxen feeding, and in another 7. How many oxen are there in both fields?

4. 3 years ago George was 8 years old. How old is he now?

5. Flora recited 5 perfect lessons yesterday, and 5 more to-day. How many did she recite both days?

6. In a cage are 4 old birds, and 8 young birds. How many birds are in the cage?

7. A man bought a chair for 7 dollars, and a desk for 8 dollars. How many dollars did both cost?

LESSON LXIV.



1. Jane spent 3 cents for candy, and 9 cents for a book. How much did she spend in all?

2. Albert rode 8 miles in the morning, and 9 in the afternoon. How many miles did he ride in all?

3. Caleb, having spent 9 cents, found he had 10 remaining. How many cents had he at first?

4. A farmer sold to one man 3 sheep, to another 3, and then found he had 7 remaining. How many had he at first?

5. Henry received 4 merit-marks, Rollo 5, and Samuel 7. How many merit-marks did they all receive?

6. Jasper has 4 marbles, Peter 3, and Ezra 6. How many marbles have they all?

7. James is 4 years old, Arthur 2 years, and Edward 1 year. What is the sum of their ages?

8. Jane had 9 cents, Mary 8, and Lydia 5. How many cents had they all?

9. Maria gave her sister 3 apples, lost 2, and had 9 left? How many had she at first?

10. A lady bought a dress for 8 dollars, a bonnet for 9 dollars, and a pair of gloves for 1 dollar. How much did they all cost?

11. If you give 10 cents for an inkstand, 5 for a pen, and 3 for a pencil, how much will they all cost?

12. Eva paid 8 cents for a comb, 4 cents for thread, and had left 2 cents. How much had she at first?

LESSON LXV.



1. John has 3 apples, and William has 3. How many more has John than William? Why?

2. Samuel caught 8 birds, but let 7 of them escape. How many had he left? 1

3. Isabel is 13 years old, and Susan only 3. How many years older is Isabel than Susan? 10

4. 12 black-birds were on a fence, but 3 of them have flown away. How many then remain? 9

5. James had 11 figs, and ate 4 of them. How many has he left? 7

6. Walter bought 10 slate-pencils, and gave 9 of them away. What number then remained? 1

7. Gave 11 dollars to Emily, and 7 to Betsey. How many more dollars were given to Emily than to Betsey? 4

8. Sold a cloak for 14 dollars, and received as part pay 9 dollars. How many dollars remained due?

9. Gave 10 cents for apples, and 12 cents for peaches. How much more was given for the peaches than for the apples? 2

10. Andrew had 9 chickens, but the hawks have taken 4 of them. How many remain? 5

11. Edwin had 20 cents, but has given away 10 in charity. How many cents has he left? 10

12. James is 18 years old, and John is 10 years old. How much older is James than John?

LESSON LXVI.



1. Ellen has 9 chickens; 7 of them are light-colored, and the remainder dark. How many of them are dark-colored?

2. In a class of 9 boys, only 2 had got their lessons. How many failed to have their lessons?

3. Eli rode 12 miles, and walked 6. How much further did he ride than walk?

4. Paid for a coat 13 dollars, and for a pair of pants 7. How many dollars did the coat cost more than the pants?

5. Nathan bought a slate for 8 cents, and sold it for 13 cents. How much did he gain?

6. A man bought a gun for 11 dollars, and sold it for 9. How much did he lose?

7. From a bucket of water containing 14 quarts there have been taken out 7 quarts. How much is left in the bucket?

8. 16 swallows light on a barn, and 10 of them fly off again. How many remain?

9. Henry is 18 years old, and Willie 9 years. How many years older is Henry than Willie?

10. John answered 19 questions, and Charles only 10. How many more questions did John answer than Charles?

11. If you have 20 dollars, and should lose 10 of them, how many dollars would you have left?

LESSON LXVII.



1. John's dog caught 19 rabbits in two weeks; 8 of them the first week, and the remainder the second week. How many did he catch the second week? Why?

2. Helen found in the orchard 15 apples. After she had given 4 of them to Mary, and 5 to Sarah, how many had she left?

3. Jonathan had 6 marbles, and Peter gave him 3 more; but on the way to school he lost 4 of them. How many had he then left? Why?

4. From a flock of 18 sheep the dogs killed 8, and 1 died. How many remained?

5. Jacob picked 6 quarts of berries one day, and the next day 8 quarts, and sold 9 quarts. How many quarts of berries did he keep?

6. 17 pigeons were flying together; 6 of them were shot at one time, and 2 at another. How many of the pigeons escaped?

7. Edgar had 13 chestnuts, but gave Edwin 3, George 2, and Jane 4. How many had he left?

8. James gathered 16 quarts of berries, and sold 6 quarts to one man, and 2 quarts to another. How many then had he left?

9. Edwin earned 18 dollars. After giving his mother 7 dollars, and his sister 1 dollar, how many dollars had he left?

10. Bought a hat for 5 dollars and a vest for 5 dollars, and gave in payment a 20-dollar bill. How many dollars should be paid back?



LESSON LXVIII.

1. 2 boys are coasting and 3 times as many are skating. How many are skating?

2. How many are 2 times 2? 2 times 3? 2 times 5? 2 times 4? 2 times 7?

3. How many are 3 times 1? 3 times 3? 3 times 6? 3 times 8? 3 times 10?

4. How many are 4 times 3? 4 times 5? 4 times 4? 4 times 9? 4 times 1?

5. How many are 5 times 3? 5 times 6? 5 times 7? 5 times 0? 5 times 10?

6. How many are 6 times 2? 6 times 4? 6 times 6? 6 times 7? 6 times 9?

7. How many are 7 times 3? 7 times 4? 7 times 7? 7 times 8? 7 times 10?

8. How many are 8 times 2? 8 times 5? 8 times 7? 8 times 8? 8 times 10?

LESSON LXIX.

1. How many are 8 times 1? 8 times 2? 8 times 4? 8 times 6? 8 times 9?

2. How many are 9 times 2? 9 times 3? 9 times 7? 9 times 6? 9 times 10?

3. How many are 10 times 1? 10 times 2? 10 times 6? 10 times 4? 10 times 10?

4. How many are 2 times 6? 3 times 4? 5 times 8? 4 times 7? 6 times 3? 9 times 9?

5. How many are 6 times 0? 6 times 1? 2 times 10? 4 times 10? 5 times 2? 7 times 2? 7 times 9?

6. When sugar is sold at 8 cents a pound, how much must be paid for 3 pounds? Why?

WRITTEN EXERCISES.

Write and divide:—

(7.)	(8.)	(9.)	(10.)
6)90	8)88	8)96	9)90

Quotient, 15

(11.)	(12.)	(13.)	(14.)	(15.)
9)99	4)56	7)77	3)81	6)72

(16.)	(17.)	(18.)	(19.)	(20.)
3)72	2)94	5)75	9)81	8)96

(21.)	(22.)	(23.)	(24.)	(25.)
7)84	5)85	6)84	8)96	9)99

LESSON LXX.

1. Ellen saw in a pool 2 frogs, and in a pond 7 times as many. How many did she see in the pond?



2. A farmer raised 5 bushels of peas, and 7 times as many bushels of beans. How many bushels of beans did he raise?

3. If one cord of wood cost 8 dollars, how many dollars will 6 cords cost?

4. How many cents must be paid for 9 pounds of cheese, at 10 cents a pound?

5. There are on the lake 6 boats, and 10 persons in each boat. How many persons are in all the boats?

6. If 8 apples will buy 1 ruler, how many apples will it take to buy 7 rulers?

7. How many roses are on 9 bushes, if there are 6 on each bush?

8. What will cost 9 yards of cloth, at 2 dollars a yard? Why?

9. What will cost 6 pairs of boots, at 4 dollars a pair? Why?

10. If Robert can walk 3 miles in 1 hour. how many miles can he walk in 7 hours? Why?

11. What will cost 6 loaves of bread, at 8 cents a loaf? Why?

12. How many cents must be paid for 8 slates, at 10 cents each?

LESSON LXXI.

1. What cost 9 lambs, at 3 dollars each? Why?



2. If there are 8 panes of glass in 1 window, how many panes are there in 7 windows?

3. At 10 cents an hour, how many cents may be earned in 10 hours?

4. Augustus picked 9 quarts of berries. If he gets 9 cents a quart for them, how many cents will he obtain?

5. If a scholar can perform 9 examples in one hour, how many can he perform in 7 hours?

6. If Samuel should recite 6 perfect lessons in one day, how many perfect lessons would he recite in 10 days?

LESSON LXXII.

1. John has 5 marbles, and James has 6 times as many as John. How many has James? Why?

2. At 4 dollars apiece, what cost 8 sheep? Why?

3. At 5 cents a quart, how much must be paid for 3 quarts of milk?

4. Charles found 3 eggs, and Alfred 6 times as many. How many did Alfred find?

5. If Henry write 7 lines a day, how many will he write in 6 days?

6. If 1 pound of starch cost 8 cents, what will 5 pounds cost?



LESSON LXXV.

1. If an apple, or any thing, be divided into two equal parts, what will one of those parts be? **One Half.**
2. How many halves make one whole? **Two.**
3. If an orange be divided into three equal parts, what will one of those parts be? **One Third.**
4. How many thirds make one whole? **Three.**
5. If a melon be divided into four equal parts, what will one of those parts be? **One Fourth.**
6. How many fourths make one whole? **Four.**
7. If a cake be divided into five equal parts, what will one of those parts be? **One Fifth.**
8. How many fifths make one whole? **Five.**
9. If a line be divided into six equal parts, what is one of those parts called? **One Sixth.**
10. How many sixths make one whole? **Six.**

LESSON LXXVI.

1. When any thing is divided into seven equal parts, what is one of those parts? **One Seventh.**

2. How many sevenths make a whole one?

3. What is meant by one eighth of any thing?

Ans. *One of the eight equal parts into which a thing is divided.*

4. How many eighths make a whole one?

5. What is meant by one ninth of any thing?

6. How many ninths make a whole one?

7. What is meant by one tenth of any thing?

8. How many tenths make a whole one?

9. James had 2 fourths of a dollar, and his mother gave him one fourth more. How many fourths of a dollar then had he?

10. 2 fifths of an acre are planted with beets, and 2 fifths with carrots. What part of an acre is planted with both?

11. 3 eighths and 4 eighths are how many eighths?

12. George gave 2 sixths of a melon to his brother, and to his sister 3 sixths. What part did he give away in all?

13. Bought a book for 2 fourths of a dollar, and sold it for 3 fourths of a dollar. How much is gained by the sale?

14. If you should have 5 sevenths of a pound of candy, and should give away 3 sevenths of a pound, how much would you have left?

15. 8 ninths less 6 ninths are how many ninths?

LESSON LXXVII.



1. How many halves are there in one orange?

2. How many halves in 2 oranges? Why?

Ans. Since there are 2 halves in one orange, in 2 oranges there are 2 times 2 halves, or 4 halves.

3. How many halves in 3 oranges? In 4 oranges? In 5 oranges? In 6 oranges?

4. How many thirds in 1 orange? In 2 oranges? Why?

5. How many thirds in 3 oranges? In 4 oranges?



6. How many fourths in one melon? In 2 melons? Why?

7. How many fourths in 3 pears? In 5 pears?

8. If one half of a melon cost 6 cents, how much will 2 halves, or a whole melon, cost? Why?

Ans. Since one half cost 6 cents, 2 halves, or a whole one, will cost 2 times 6 cents, or 12 cents.

9. If one third of a pie cost 4 cents, how much will a whole pie cost?

10. 4 is one third of what number? Why?

11. If one fifth of an acre of land is worth 6 dollars, how much is 2 fifths worth? Why?

12. If one fourth of a yard of cloth cost 8 cents, how much will 2 fourths cost? 3 fourths? A whole yard?

LESSON LXXVIII.

1. In 4 halves of a dollar, how many dollars? Why?

Ans. Since there are 2 halves in one dollar, in 4 halves of a dollar there are as many dollars as 2 halves is contained times in 4 halves, or 2 dollars.

2. In 6 halves of an orange, how many oranges? In 8 halves? In 10 halves?

3. In 6 thirds of an apple, how many apples?

4. How many whole ones in four fourths? In 8 fourths? In 12 fourths? In 16 fourths?

5. How many whole ones in 10 fifths? Why?

6. How many whole ones in 12 sixths? Why?

7. If a yard of ribbon cost 4 cents, how much will one half of a yard cost? Why?

Ans. Since a whole yard cost 4 cents, one half of a yard will cost one half of 4 cents, or 2 cents.

8. If a melon is worth 10 cents, how much is half a melon worth? Why?

9. One half of 10 is how many?

10. If a cord of wood is worth 8 dollars, how much is one fourth of a cord worth?

11. One fourth of 8 is how many?

12. At 10 dollars a barrel, what will one fifth of a barrel of flour cost? Two fifths?

13. One third of twelve is how many?

14. A man is 35 years old, and his son is one seventh as old. How old is his son?

15. At 63 cents a yard, what is one ninth of a yard of cloth worth? Four ninths?

LESSON LXXIX.



1. What is United States money? **United States Money** is that used in the United States.

Recite the table:—



10 mills	are	1 cent,
10 cents,	"	1 dime,
10 dimes,	"	1 dollar,
10 dollars,	"	1 eagle.

2. How many mills make 1 cent? 2 cents?

3. How many cents make 1 dime? 2 dimes? 3 dimes?

4. How many cents are 1 dime and 3 cents? 1 dime and 4 cents?



5. How many dimes in 1 dollar? 2 dollars?



6. How many cents in 10 dimes, or 1 dollar?

7. How many dollars in 1 eagle? In half of an eagle? In a fourth of an eagle?

8. How many eagles in 50 dollars? In 60 dollars?

9. At half a dollar each, how many dollars will 6 books cost?

LESSON LXXX.

1. How many dollars will 2 barrels of flour cost at 10 dollars a barrel?

2. At 10 dollars a barrel, how many barrels of flour can be bought for 20 dollars?

3. What is the sign of dollar or dollars? The **Sign of Dollar or Dollars** is \$.

4. In \$31, what does the sign denote? It denotes that the 31 expresses that number of dollars.

5. What then does \$25 express? \$43 express?

6. When dollars and cents are expressed together by figures, how are the figures expressing the cents separated from those expressing the dollars?

By the **Decimal Point** (.).

7. What does \$25.10 express? It expresses twenty-five dollars and ten cents.

8. What then do the figures in the two places at the right of the point express? **Cents.**

9. What does \$31.63 express? \$9.81 express?

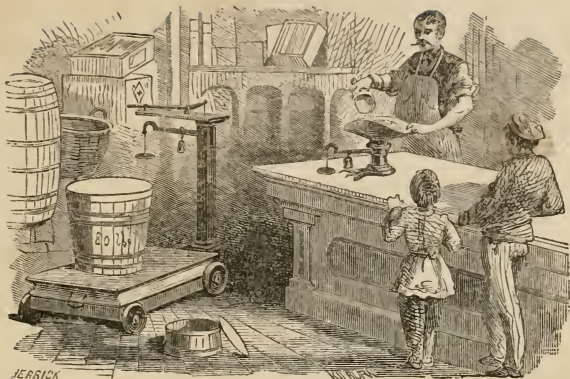
10. What does a figure written in the third place at the right of the point express? **Mills.**

11. What then does \$8.656 express? It expresses eight dollars sixty-five cents six mills.

12. What does \$19.425 express? \$73.187 express?

Write and read:—

13. \$69.	16. \$100.50.	19. \$12.375.
14. \$81.	17. \$63.579.	20. \$93.06.
15. \$42.	18. \$8.606.	21. \$78.055.



LESSON LXXXI.

1. What is avoirdupois weight? **Avoirdupois Weight** is that used in weighing common articles, as tea, sugar, butter, etc.

2. Recite the table :—

16 ounces are 1 pound.

100 pounds, 1 hundred weight.

20 hundred weight, 1 ton.

Also, 25 pounds are 1 quarter ; 2000 pounds 1 ton.

3. How many ounces are there in 1 pound? In 1 half of a pound?

4. How many pounds are there in a quarter?

5. How many quarters in 1 hundred weight? In 2 hundred weight? In 3 hundred weight?

6. How many hundred weight in 1 ton? In 6 tons? At 4 dollars a hundred weight, what will 1 ton of hay cost? 1 half of a ton?

LESSON LXXXII.

1. What is Troy weight? **Troy Weight** is that used in weighing gold, silver, and jewels.

2. Recite the table:—

24 grains are 1 pennyweight.

20 pennyweights, 1 ounce.

12 ounces, 1 pound.

3. How many grains make 1 pennyweight?

4. How many pennyweights are there in 1 ounce?

5. How many pennyweights are there in 1 half of an ounce? In 1 fourth of an ounce?

6. How many ounces in 1 pound? In 1 half of a pound? In 1 fourth of a pound?

LESSON LXXXIII.

1. What is linear or long measure? **Linear Measure** is that used for measuring distances and lengths.

2. Recite the table:—

12 inches are 1 foot.

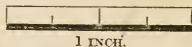
3 feet, 1 yard.

$5\frac{1}{2}$ yards, or $16\frac{1}{2}$ feet, 1 rod.

320 rods, 1 mile.

Also, 40 rods 1 furlong; 8 furlongs 1 mile.

3. How many inches are there in 1 foot? In 1 half of a foot?



4. How many feet in 1 yard? In 2 yards? In 3 yards? In 5 yards?

5. How many yards are there in 1 rod?

6. How many rods are there in 1 furlong?
7. How many furlongs in 1 mile? In 1 half of a mile? In 2 miles?
8. How many yards in a piece of tape 27 feet long?
9. If your arithmetic is 6 inches long and your slate 9 inches, how much longer is the slate?
10. In 3 feet how many yards? In 6 feet? In 18 feet?
11. In 3 miles how many furlongs? In 6 miles? In 7 miles?

LESSON LXXXIV.

1. What is liquid measure? **Liquid Measure** is that used in measuring liquids, as molasses, milk, etc.

2. Recite the table:—

4 gills	are	1 pint.
2 pints,		1 quart.
4 quarts,		1 gallon.



3. How many gills are there in 1 pint? In 2 pints? In 3 pints?
4. How many pints are there in 1 quart? In 2 quarts? In 8 quarts?
5. How many quarts in 1 gallon? In 2 gallons? In 6 gallons?
6. In 12 gills how many pints? In 16 gills?
7. In 4 quarts how many gallons? In 8 quarts? In 16 quarts?
8. In 5 pints how many gills? In 6 pints? In 8 pints?

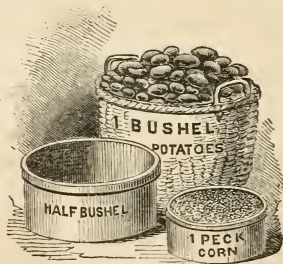
9. How many gills are there in 1 half of a pint?
10. How many quarts are there in 16 pints?
11. How many gallons in 20 quarts? In 36 quarts?
12. At 6 cents a quart, what costs 1 gallon of milk?
13. At 12 cents a quart, what costs 1 pint of molasses?
14. When oil costs 10 cents a pint, what is the cost of a quart?
15. How many gills in 1 quart? In 2 quarts? In 3 quarts?

LESSON LXXXV.

1. What is dry measure? **Dry Measure** is that used in measuring dry articles, as grain, apples, corn, etc.

2. Recite the table:—

2 pints	are 1 quart.
8 quarts,	1 peck.
4 pecks,	1 bushel.



3. How many pints are there in 1 quart? In 3 quarts? In 5 quarts?
4. How many quarts in 1 peck? In 2 pecks? In 3 pecks?
5. How many pecks in 1 bushel? In 2 bushels? In 3 bushels?
6. In 4 pints how many quarts? In 8 pints?
7. In 16 quarts how many pecks? In 24 quarts?

8. What costs 1 quart of cherries, at 6 cents a pint?

9. At 5 cents a quart, what costs 1 peck of beans?

10. In 28 pecks how many bushels? In 32 pecks?

11. At 2 dollars a peck, what costs 1 bushel of berries? 2 bushels?

12. How many pecks in three bushels and 3 pecks?

13. At 1 dollar a peck, what cost 3 bushels and 3 pecks of walnuts?

LESSON LXXXVI.

1. What is time? **Time** is a measured portion of duration.

2. Recite the table:—

60 seconds	are 1 minute.
60 minutes,	1 hour.
24 hours,	1 day.
365 days,	1 common year.
366 days,	1 leap year.

3. Recite the table of

MONTHS.

1. January	has 31 days.	7. July	has 31 days.
2. February,	28 or 29.	8. August,	31 “
3. March,	31 days.	9. September,	30 “
4. April,	30 “	10. October,	31 “
5. May,	31 “	11. November,	30 “
6. June,	30 “	12. December,	31 “

February has in leap years 29 days, and in common years 28 days.

4. How many seconds are there in 1 minute?
5. How many minutes make 1 hour?
6. How many hours make 1 day?
7. How many days are there in a common year? In a leap year?
8. How many days has January? February? March? April?
9. What month has in leap year 29 days?
10. How many days has May? June? July? August?
11. How many days has September? October? November? December?

LESSON LXXXVII.

1. How many units or ones are 1 ten? 2 tens? 3 tens? 4 tens? 5 tens? 6 tens? 7 tens? 8 tens? 9 tens? 10 tens?

2. How many tens in 20 units? In 30 units? In 40 units? In 50 units? In 60 units? In 80 units? In 90 units? In 100 units?

3. What are 100 units or ones called?

One Hundred.

4. How can you express one hundred by figures? By writing the figure 1 with 00 on the right; thus,

100.

5. What are 10 hundreds called? **One Thousand.**

6. How can you express one thousand by figures? By writing the figure 1 with 000 on the right; thus,

1000.

7. What is that which you have now been attending to called? **Arithmetic.**

8. Of what does arithmetic treat? **Numbers.**

9. What does arithmetic teach? **Arithmetic** teaches how to reckon by numbers.

10. Write on the slate or blackboard, in figures, the first nine numbers.

11. Write and read the numbers expressed by the figures, 2, 5, 6, 4, 8, 10, 9, 11, 12.

12. Begin at the right and recite the names of the places or orders of figures in the following

Table.

Thousands.
Hundreds.
Tens.
Units.

9. Nine.

16. Sixteen.

423. Four hundred twenty-three.

5768. Five thousand seven hundred sixty-eight.

13. What number is expressed by 9? By 16?

14. What number is expressed by 423? 4 hundreds 2 tens 3 units, or four hundred twenty-three.

15. What number is expressed by 5768? 5 thousands 7 hundreds 6 tens 8 units, or five thousand seven hundred sixty-eight.

16. What is expressed by a figure standing alone?

Units.

17. What is expressed by a figure in the second order, or in the place next to the left of units? **Tens.**

18. What is expressed by a figure in the third order?

Hundreds.

19. What is expressed by a figure in the fourth order?

Thousands.



LESSON LXXXVIII.

1. What is notation? **Notation** is the method of writing numbers.
2. What is numeration? **Numeration** is the method of reading numbers.
3. Recite the table:—

10 units	are 1 ten.
10 tens,	1 hundred,
10 hundreds,	1 thousand.
4. How many units are 1 ten? How many tens are 1 hundred? 2 hundreds?
5. How many hundreds are 1 thousand? 2 thousands? 3 thousands? 8 thousand?

LESSON LXXXIX.

Write and read:—

(1.)	(2.)	(3.)	(4.)	(5.)
26	71	99	82	88
39	80	28	13	96
40	4	31	49	70
(6.)	(7.)	(8.)	(9.)	(10.)
83	110	118	501	899
95	89	105	66	998
100	109	150	606	989
(11.)	(12.)	(13.)	(14.)	
144	303	6708	1234	
1144	300	4576	5636	
6110	1330	3421	7396	
(15.)	(16.)	(17.)	(18.)	
2161	745	450	3215	
4502	600	632	6215	
1234	1302	1725	6215	
3107	7805	2141	3145	

Write in figures:—

- | | |
|--|-----------------------------|
| 19. Eleven. | 24. One hundred six. |
| 20. Thirty-two. | 25. Two hundred ten. |
| 21. Seventy-nine. | 26. Three hundred nine. |
| 22. Eighty-one. | 27. Four hundred 'sixty. |
| 23. Ninety-seven. | 28. Six hundred forty-five. |
| 29. One thousand two hundred fifty-six. | |
| 30. Three thousand five hundred sixty-three. | |
| 31. Five thousand two hundred fifty-one. | |

LESSON XC.

Write and read:—

(1.)	(2.)	(3.)	(4.)
10	111	400	123
15	125	500	456
23	362	440	789
61	410	444	321
70	397	555	654
(5.)	(6.)	(7.)	(8.)
1234	3456	3000	2640
2000	5463	3003	1346
2200	5602	4500	2132
5550	6052	4005	3671
6789	2005	7077	2005
(9.)	(10.)	(11.)	(12.)
1422	3405	2231	9834
6171	6725	3225	8352
3140	4106	4252	6761
1233	4455	734	365

Write in figures:—

- | | |
|---|------------------------------|
| 13. Seventeen. | 19. One hundred eleven. |
| 14. Seventy-one. | 20. Two hundred three. |
| 15. Ninety-nine. | 21. Three hundred three. |
| 16. One hundred. | 22. Four hundred forty-four. |
| 17. Ninety-three. | 23. Seven hundred eighty. |
| 18. Three hundred. | 24. Eight hundred nineteen. |
| 25. One thousand one hundred twelve. | |
| 26. Two thousand five hundred fifty. | |
| 27. Eight thousand sixty-seven. | |
| 28. Nine thousand nine hundred ninety-nine. | |

LESSON XCI.

1. How may numbers be expressed? By words.
2. What is the method of expressing numbers by figures called? The **Arabic Method**.
3. Why is it so called? Because it was obtained from the Arabs.
4. What character besides figures are sometimes used in expressing numbers? **Letters**.
5. How many different letters are used? Seven.
6. Name the letters. **I, V, X, L, C, D, M.**
7. For what number does the letter I stand? **One**.
8. For what number does the letter V stand? **Five**.
9. For what number does the letter X stand? **Ten**.
10. For what number does the letter L stand? **Fifty**.
11. For what number does the letter C stand?
One Hundred.
12. For what number does the letter M stand?
One Thousand.
13. What is the method of expressing numbers by letters called? The **Roman Method**.
14. Why is it so called? Because it was obtained from the Romans.

Write the letter standing:—

- | | |
|----------------|-----------------------|
| 15. For one. | 19. For one hundred. |
| 16. For five. | 20. For five hundred. |
| 17. For ten. | 21. For one thousand. |
| 18. For fifty. | |

LESSON XCII.

1. What is the effect of repeating a letter? Repeating a letter repeats the number it denotes.

2 If then I stands for one, for how many do III stand? **Three.**

3. What is expressed by writing a letter denoting a less number before a letter denoting a greater number?

The **Difference** of those numbers.

4. If then X stands for ten, for how many does IX stand? For the difference between one and ten, or nine.

5. What is expressed by writing a letter denoting a less number after a letter denoting a greater number?

The **Sum** of those numbers.

6. If then L stands for fifty, for how many do LI stand? Fifty and one, or fifty-one.

7. Write the letters of the following table, and tell the numbers expressed.

Numbers.	Letters.	Numbers.	Letters.
One,	I.	Thirty,	XXX.
Two,	II.	Forty,	XL.
Three,	III.	Fifty,	L.
Four,	IV.	Sixty,	LX.
Five,	V.	Seventy,	LXX.
Six,	VI.	Eighty,	LXXX.
Seven,	VII.	Ninety,	XC.
Eight,	VIII.	One hundred,	C.
Nine,	IX.	Two hundred,	CC.
Ten,	X.	Five hundred,	D.
Eleven,	XI.	Six hundred,	DC.
Twenty,	XX.	One thousand,	M.

LESSON XCIII.

1. How many are 7 and 3? 6 and 5 and 1?
 2. What is addition? **Addition** is the finding a number equal to two or more numbers of the same kind.
 3. What number is equal to 9 and 4?
 4. What is the sum of two or more numbers? The **Sum** of two or more numbers is that number which is equal to those numbers.
 5. What is the sum of 8 and 5? Of 6 and 7?
- How many are

(6.)	(7.)	(8.)
9. 2 and 2?	17. 1 and 5?	25. 4 and 4?
10. 3 and 2?	18. 6 and 2?	26. 5 and 5?
11. 4 and 6?	19. 5 and 7?	27. 6 and 6?
12. 2 and 4?	20. 8 and 1?	28. 4 and 5?
13. 5 and 3?	21. 1 and 3?	29. 5 and 2?
14. 3 and 6?	22. 6 and 5?	30. 10 and 3?
15. 1 and 9?	23. 9 and 0?	31. 5 and 10?
16. 7 and 4?	24. 5 and 8?	32. 11 and 5?

WRITTEN EXERCISES.

Write and add:—

(33.)	(34.)	(35.)	(36.)	(37.)	(38.)
16	17	60	13	14	16
31	11	70	33	30	16
41	42	55	40	12	34
—	—	—	—	—	—
(39.)	(40.)	(41.)	(42.)	(43.)	(44.)
167	564	271	924	516	810
710	432	808	442	731	201
311	500	520	412	102	401
—	—	—	—	—	—

LESSON XCIV.

How many are

- | | |
|--------------------|---------------------|
| 1. 2 and 2 and 1? | 9. 4 and 3 and 7? |
| 2. 3 and 2 and 2? | 10. 8 and 1 and 0? |
| 3. 5 and 3 and 3? | 11. 9 and 2 and 5? |
| 4. 7 and 1 and 4? | 12. 2 and 6 and 1? |
| 5. 6 and 4 and 5? | 13. 10 and 5 and 4? |
| 6. 1 and 9 and 6? | 14. 6 and 1 and 3? |
| 7. 10 and 2 and 8? | 15. 11 and 4 and 7? |
| 8. 11 and 5 and 4? | 16. 12 and 3 and 7? |

WRITTEN EXERCISES.

Write and add:—

(17.)	(18.)	(19.)	(20.)	(21.)	(22.)
610	612	171	143	816	771
132	390	301	261	191	117
70	10	112	412	101	231
(23.)	(24.)	(25.)	(26.)	(27.)	(28.)
781	257	126	391	182	910
631	861	275	710	921	297
(29.)	(30.)	(31.)	(32.)	(33.)	(34.)
416	413	103	129	812	700
112	142	451	310	104	511
301	603	261	230	222	132
(35.)	(36.)	(37.)	(38.)	(39.)	
4131	5410	7102	8201	9102	
4121	3444	1703	2143	1034	
(40.)	(41.)	(42.)	(43.)	(44.)	
4831	9102	1111	1345	9810	
7201	6132	9109	19	1518	

LESSON XCV.

1. What is the sign of addition? The Sign of Addition is an erect cross, $+$, and is called *plus*.

2. In $3 + 2$, what does the sign denote? It denotes that 3 and 2 are to be added.

WRITTEN EXERCISES.

Write and add:—

- | | |
|------------------------|----------------------------|
| 3. $66 + 315 + 162$. | 8. $205 + 79 + 446$. |
| 4. $31 + 109 + 906$. | 9. $515 + 304 + 79$. |
| 5. $38 + 90 + 115$. | 10. $106 + 412 + 112$. |
| 6. $130 + 412 + 55$. | 11. $316 + 532 + 230$. |
| 7. $316 + 214 + 100$. | 12. $1631 + 8102 + 3120$. |

(13.)	(14.)	(15.)	(16.)	(17.)
1241	6130	2712	1717	1007
3212	1021	7181	1202	2100
4106	1210	1104	1102	1527
<u>1210</u>	<u>1418</u>	<u>3010</u>	<u>3370</u>	<u>1013</u>

18. Add together 4, 6, 3, 10, 15, 11, 16, 70, and 35.

19. A farmer has in one pasture 162 sheep, and in another pasture 217. How many has he in both pastures?

20. A man gave 125 dollars for a chaise, 250 dollars for a horse, and 30 dollars for a harness. How much did they all cost him?

21. John has 63 apples, Henry 129, and Thomas 86. How many have they in all?

22. Samuel is 14 years old, John 19 years, and their father 50 years. What is the sum of their ages?

23. In an orchard 421 trees bear apples, 125 bear pears, 78 bear cherries, 69 bear peaches, and 10 bear plums. How many trees are there in all?

24. A merchant paid 1630 dollars for cloth, and 5167 dollars for other goods. How much did he pay for the whole?

25. A butcher sold 475 pounds of beef to one man, 684 pounds to another, and 986 pounds to another. How many pounds did he sell in all?

LESSON XXVI.

1. If 4 be taken from 9, how many will remain? 6 from 7? 8 from 15?

2. What is subtraction? **Subtraction** is the taking of one number from another of the same kind, to find their difference.

3. What is the difference between two numbers? The **Difference** between two numbers is that which is left after taking the one from the other.

4. What is the larger of the two given numbers in subtraction called? The **Minuend**.

5. What is the smaller of the two given numbers in subtraction called? The **Subtrahend**.

6. What is the difference between 9 and 3? 13 and 5? 18 and 9?

7. What is the difference between 10 and 4? 15 and 9? 17 and 8?

WRITTEN EXERCISES.

Write and subtract:—

(8.)	(9.)	(10.)	(11.)	(12.)	(13.)
55	58	62	73	81	96
24	41	12	32	41	75
—	—	—	—	—	—
(14.)	(15.)	(16.)	(17.)	(18.)	(19.)
28	37	21	32	25	44
19	26	16	24	16	42
—	—	—	—	—	—
(20.)	(21.)	(22.)	(23.)	(24.)	(25.)
55	63	71	84	81	94
41	58	19	65	11	85
—	—	—	—	—	—

LESSON XCVII.

Leaves how many? should be put by the teacher after each of the following combination of numbers.

1. 2 from 4	15. 1 from 8	29. 2 from 11
2. 4 from 6	16. 3 from 7	30. 4 from 13
3. 6 from 7	17. 2 from 6	31. 5 from 11
4. 3 from 5	18. 4 from 9	32. 6 from 14
5. 1 from 9	19. 5 from 6	33. 1 from 10
6. 5 from 8	20. 6 from 10	34. 8 from 16
7. 8 from 9	21. 4 from 8	35. 7 from 9
8. 4 from 5	22. 7 from 11	36. 6 from 15
9. 5 from 7	23. 8 from 10	37. 8 from 11
10. 3 from 6	24. 6 from 15	38. 4 from 12
11. 2 from 8	25. 3 from 11	39. 3 from 8
12. 3 from 9	26. 5 from 9	40. 8 from 13
13. 4 from 4	27. 8 from 12	41. 0 from 9
14. 7 from 8	28. 9 from 17	42. 9 from 18

43. What is the sign of subtraction? The **Sign of Subtraction** is a short horizontal line, —, and is called *minus*.

44. In $5 - 2$, what does the sign denote? It denotes that two is to be subtracted from five.

WRITTEN EXERCISES.

Write and subtract:—

$$45. 14 - 7.$$

$$46. 19 - 11.$$

$$47. 34 - 8.$$

$$48. 75 - 25.$$

$$49. 83 - 34.$$

$$50. 68 - 9.$$

$$51. 87 - 63.$$

$$52. 92 - 13.$$

$$53. 68 - 16.$$

$$54. 77 - 28.$$

(55.)	(56.)	(57.)	(58.)	(59.)	(60.)
-------	-------	-------	-------	-------	-------

363	728	556	479	623	784
-----	-----	-----	-----	-----	-----

141	128	323	246	101	342
-----	-----	-----	-----	-----	-----

(61.)	(62.)	(63.)	(64.)	(65.)	(66.)
-------	-------	-------	-------	-------	-------

783	894	932	844	724	975
-----	-----	-----	-----	-----	-----

572	265	303	326	617	846
-----	-----	-----	-----	-----	-----

(67.)	(68.)	(69.)	(70.)	(71.)	(72.)
-------	-------	-------	-------	-------	-------

547	568	433	455	719	880
-----	-----	-----	-----	-----	-----

256	370	152	163	431	780
-----	-----	-----	-----	-----	-----

(73.)	(74.)	(75.)	(76.)	(77.)
-------	-------	-------	-------	-------

2602	2162	7160	1000	8443
------	------	------	------	------

1402	1052	1000	100	4523
------	------	------	-----	------

78. If a boat-load of corn be bought for 415 dollars and sold for 528 dollars, how many dollars will be gained by the sale?

79. A house which cost 1785 dollars was sold for 1672 dollars. For how many dollars less than the cost was it sold?

LESSON XCVIII.

1. How many are 6 times 7? 4 times 3?
2. What is multiplication? **Multiplication** is the taking a number a certain number of times.
3. What is a product? A **Product** is the result of a multiplication.
4. What is the number to be multiplied or taken called? The **Multiplicand**.
5. What is the number given to multiply by called? The **Multiplier**.

WRITTEN EXERCISES.

(6.)	(7.)	(8.)	(9.)	(10.)	(11.)
51	42	62	71	81	52
4	4	3	5	5	5
—	—	—	—	—	—
(12.)	(13.)	(14.)	(15.)	(16.)	(17.)
121	424	841	426	304	128
4	2	3	5	4	5
—	—	—	—	—	—
(18.)	(19.)	(20.)	(21.)	(22.)	(23.)
216	412	402	211	201	631
6	6	7	9	9	7
—	—	—	—	—	—
(24.)	(25.)	(26.)	(27.)	(28.)	(29.)
323	410	622	913	412	713
3	4	4	3	5	2
—	—	—	—	—	—
(30.)	(31.)	(32.)	(33.)	(34.)	(35.)
614	735	101	901	420	814
7	8	9	9	8	8
—	—	—	—	—	—

LESSON XCIX.

1. Recite the table:—

2 times	3 times	4 times	5 times	6 times	7 times
1 are 2	1 are 3	1 are 4	1 are 5	1 are 6	1 are 7
2 " 4	2 " 6	2 " 8	2 " 10	2 " 12	2 " 14
3 " 6	3 " 9	3 " 12	3 " 15	3 " 18	3 " 21
4 " 8	4 " 12	4 " 16	4 " 20	4 " 24	4 " 28
5 " 10	5 " 15	5 " 20	5 " 25	5 " 30	5 " 35
6 " 12	6 " 18	6 " 24	6 " 30	6 " 36	6 " 42
7 " 14	7 " 21	7 " 28	7 " 35	7 " 42	7 " 49
8 " 16	8 " 24	8 " 32	8 " 40	8 " 48	8 " 56
9 " 18	9 " 27	9 " 36	9 " 45	9 " 54	9 " 63
10 " 20	10 " 30	10 " 40	10 " 50	10 " 60	10 " 70
11 " 22	11 " 33	11 " 44	11 " 55	11 " 66	11 " 77
12 " 24	12 " 36	12 " 48	12 " 60	12 " 72	12 " 84

WRITTEN EXERCISES.

	(2.)	(3.)	(4.)	(5.)	(6.)
Multiply	2123	3231	4142	6104	7221
By	8	3	2	2	4
(7.)	(8.)	(9.)	(10.)	(11.)	
6013	7102	5211	5212	1234	
4	5	5	4	6	
(12.)	(13.)	(14.)	(15.)	(16.)	
2136	3401	2725	1710	1061	
6	6	7	7	8	
(17.)	(18.)	(19.)	(20.)	(21.)	
4131	7121	6012	2041	8106	
8	7	9	9	9	

LESSON O.

1. Recite the table:—

8 times	9 times	10 times	11 times	12 times
1 are 8	1 are 9	1 are 10	1 are 11	1 are 12
2 “ 16	2 “ 18	2 “ 20	2 “ 22	2 “ 24
3 “ 24	3 “ 27	3 “ 30	3 “ 33	3 “ 36
4 “ 32	4 “ 36	4 “ 40	4 “ 44	4 “ 48
5 “ 40	5 “ 45	5 “ 50	5 “ 55	5 “ 60
6 “ 48	6 “ 54	6 “ 60	6 “ 66	6 “ 72
7 “ 56	7 “ 63	7 “ 70	7 “ 77	7 “ 84
8 “ 64	8 “ 72	8 “ 80	8 “ 88	8 “ 96
9 “ 72	9 “ 81	9 “ 90	9 “ 99	9 “ 108
10 “ 80	10 “ 90	10 “ 100	10 “ 110	10 “ 120
11 “ 88	11 “ 99	11 “ 110	11 “ 121	11 “ 132
12 “ 96	12 “ 108	12 “ 120	12 “ 132	12 “ 144

How many are

- | | | |
|----------------|-----------------|------------------|
| 2. 2 times 3? | 17. 6 times 6? | 32. 4 times 4? |
| 3. 3 times 4? | 18. 3 times 6? | 33. 7 times 5? |
| 4. 5 times 1? | 19. 2 times 10? | 34. 2 times 8? |
| 5. 6 times 3? | 20. 2 times 9? | 35. 8 times 4? |
| 6. 4 times 6? | 21. 7 times 6? | 36. 4 times 11? |
| 7. 3 times 3? | 22. 9 times 7? | 37. 5 times 7? |
| 8. 5 times 5? | 23. 5 times 9? | 38. 6 times 8? |
| 9. 7 times 3? | 24. 9 times 0? | 39. 8 times 8? |
| 10. 8 times 4? | 25. 6 times 12? | 40. 7 times 7? |
| 11. 9 times 6? | 26. 7 times 10? | 41. 8 times 9? |
| 12. 6 times 0? | 27. 10 times 8? | 42. 9 times 9? |
| 13. 7 times 8? | 28. 8 times 7? | 43. 9 times 12? |
| 14. 4 times 8? | 29. 7 times 9? | 44. 8 times 10? |
| 15. 5 times 6? | 30. 11 times 6? | 45. 7 times 12? |
| 16. 8 times 8? | 31. 9 times 11? | 46. 10 times 10? |

LESSON CI.

WRITTEN EXERCISES.

- | | |
|----------------------|-----------------------|
| 1. Multiply 11 by 4. | 5. Multiply 113 by 6. |
| 2. Multiply 12 by 3. | 6. Multiply 233 by 7. |
| 3. Multiply 23 by 4. | 7. Multiply 761 by 5. |
| 4. Multiply 42 by 5. | 8. Multiply 443 by 8. |

9. If a man travel 35 miles in one day, how far will he travel in 9 days?

10. There are 63 gallons in one hogshead. How many gallons in 6 hogsheads?

11. How many are 7 times 162?

12. If a man earn 650 dollars in one year, how many dollars will he earn in 8 years?

13. If the distance through the earth is 7920 miles, and the distance round it three times as much, how many miles is it round the earth?

LESSON CII.

1. What is the sign of multiplication? The **Sign of Multiplication** is an inclined cross, $\times$, and is read *multiplied by*.

2. In 5×4 , what does the sign denote? It denotes that 5 is to be multiplied by 4.

WRITTEN EXERCISES.

Write and multiply:—

- | | |
|-----------------------|-----------------------|
| 3. 1060×12 . | 5. 6210×8 . |
| 4. 3257×9 . | 6. 1147×13 . |

$$\begin{array}{r} \text{Multiply} \quad (7.) \\ \text{By} \quad 123 \\ \hline \end{array}$$

$$\begin{array}{r} 123 \\ 246 \\ \hline \end{array}$$

$$\text{Product} \quad 2583$$

$$\begin{array}{r} \text{Multiply} \quad (8.) \\ \text{By} \quad 4143 \\ \hline \end{array}$$

$$\begin{array}{r} 8286 \\ 12429 \\ \hline \end{array}$$

$$\text{Product} \quad 132576$$

$$\begin{array}{r} (9.) \\ 3012 \\ 13 \\ \hline \end{array}$$

$$\begin{array}{r} (10.) \\ 781 \\ 14 \\ \hline \end{array}$$

$$\begin{array}{r} (11.) \\ 1234 \\ 23 \\ \hline \end{array}$$

$$\begin{array}{r} (12.) \\ 706 \\ 41 \\ \hline \end{array}$$

$$\begin{array}{r} (13.) \\ 1401 \\ 51 \\ \hline \end{array}$$

LESSON CIII.

$$\begin{array}{r} \text{Multiply} \quad (1.) \\ \text{By} \quad 1321 \\ \hline \end{array}$$

$$\begin{array}{r} \text{Multiply} \quad (2.) \\ \text{By} \quad 4024 \\ \hline \end{array}$$

$$\begin{array}{r} (3.) \\ 4121 \\ 22 \\ \hline \end{array}$$

$$\begin{array}{r} (4.) \\ 1341 \\ 33 \\ \hline \end{array}$$

$$\begin{array}{r} (5.) \\ 6026 \\ 15 \\ \hline \end{array}$$

$$\begin{array}{r} (6.) \\ 6206 \\ 51 \\ \hline \end{array}$$

$$\begin{array}{r} (7.) \\ 1007 \\ 91 \\ \hline \end{array}$$

$$\begin{array}{r} (8.) \\ 146 \\ 55 \\ \hline \end{array}$$

$$\begin{array}{r} (9.) \\ 4040 \\ 11 \\ \hline \end{array}$$

$$\begin{array}{r} (10.) \\ 8125 \\ 12 \\ \hline \end{array}$$

$$\begin{array}{r} (11.) \\ 913 \\ 47 \\ \hline \end{array}$$

$$\begin{array}{r} (12.) \\ 1403 \\ 64 \\ \hline \end{array}$$

$$\begin{array}{r} (13.) \\ 1111 \\ 42 \\ \hline \end{array}$$

$$\begin{array}{r} (14.) \\ 170 \\ 19 \\ \hline \end{array}$$

$$\begin{array}{r} (15.) \\ 1561 \\ 83 \\ \hline \end{array}$$

$$\begin{array}{r} (16.) \\ 1044 \\ 66 \\ \hline \end{array}$$

$$\begin{array}{r} (17.) \\ 1101 \\ 20 \\ \hline \end{array}$$

18. How much will 1050 barrels of flour cost at 14 dollars per barrel?

19. A farmer has in his farm 642 acres. How much is it worth at 40 dollars per acre?

LESSON CIV.

1. In 24 how many times 4? How many times 6? How many times 8?

2. What is division? **Division** is the finding how many times one number is contained in another.

3. What is a quotient? A **Quotient** is the result of a division.

4. What is the number to be divided called?

The **Dividend**.

5. What is the number given to divide by called?

The **Divisor**.

6. What is a remainder? A **Remainder** is that which is left after dividing.

7. Recite the table:—

1 in	2 in	3 in	4 in	5 in
1, 1 time	2, 1 time	3, 1 time	4, 1 time	5, 1 time
2, 2 times	4, 2 times	6, 2 times	8, 2 times	10, 2 times
3, 3 "	6, 3 "	9, 3 "	12, 3 "	15, 3 "
4, 4 "	8, 4 "	12, 4 "	16, 4 "	20, 4 "
5, 5 "	10, 5 "	15, 5 "	20, 5 "	25, 5 "
6, 6 "	12, 6 "	18, 6 "	24, 6 "	30, 6 "
7, 7 "	14, 7 "	21, 7 "	28, 7 "	35, 7 "
8, 8 "	16, 8 "	24, 8 "	32, 8 "	40, 8 "
9, 9 "	18, 9 "	27, 9 "	36, 9 "	45, 9 "
10, 10 "	20, 10 "	30, 10 "	40, 10 "	50, 10 "

LESSON CV.

1. Recite the table:—

6 in		7 in		8 in		9 in		10 in	
6,	1 time	7,	1 time	8,	1 time	9,	1 time	10,	1 time
12,	2 times	14,	2 times	16,	2 times	18,	2 times	20,	2 times
18,	3 “	21,	3 “	24,	3 “	27,	3 “	30,	3 “
24,	4 “	28,	4 “	32,	4 “	36,	4 “	40,	4 “
30,	5 “	35,	5 “	40,	5 “	45,	5 “	50,	5 “
36,	6 “	42,	6 “	48,	6 “	54,	6 “	60,	6 “
42,	7 “	49,	7 “	56,	7 “	63,	7 “	70,	7 “
48,	8 “	56,	8 “	64,	8 “	72,	8 “	80,	8 “
54,	9 “	63,	9 “	72,	9 “	81,	9 “	90,	9 “
60,	10 “	70,	10 “	80,	10 “	90,	10 “	100,	10 “

WRITTEN EXERCISES.

(2.) 2)542	(3.) 4)844	(4.) 3)648	(5.) 5)510	(6.) 6)612
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(7.) 8)816	(8.) 8)824	(9.) 7)721	(10.) 7)847	(11.) 9)918
---------------	---------------	---------------	----------------	----------------

(12.) 2)43	(13.) 3)68	(14.) 4)167	(15.) 4)847	(16.) 5)563
---------------	---------------	----------------	----------------	----------------

21, 1 rem.

(17.) 4)486	(18.) 5)256	(19.) 6)103	(20.) 7)4900	(21.) 8)254
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(22.) 5)654	(23.) 7)804	(24.) 6)252	(25.) 8)645	(26.) 6)726
----------------	----------------	----------------	----------------	----------------

27. Divide 484 by 4.

28. Divide 515 by 5.

29. Divide 618 by 6.

30. Divide 847 by 7.

31. Divide 910 by 8.

32. Divide 521 by 7.

33. Divide 1631 by 4.

34. Divide 9199 by 9.

LESSON CVI.

WRITTEN EXERCISES.

(1.) 7)8610 	(2.) 6)6846 	(3.) 3)1089 	(4.) 5)7505
(5.) 9)4680 	(6.) 8)1040 	(7.) 4)1745 	(8.) 2)3568
(9.) 6)3242 	(10.) 9)1782 	(11.) 6)4102 	(12.) 3)4128
(13.) 4)4890 	(14.) 7)2435 	(15.) 8)1950 	(16.) 6)4320
(17.) 5)2533 	(18.) 3)1000 	(19.) 7)4963 	(20.) 9)2040

21. A certain school of 125 scholars is divided into 5 equal divisions. How many scholars in each division?

22. A bridge is 363 feet long, and consists of 3 arches of equal length. How many feet in each arch?

23. 147 dollars have been equally divided between 7 men. How many dollars did each receive?

24. A farmer has 279 acres of land divided into 9 equal lots. How many acres are there in each lot?

25. 8 is contained in 248 how many times?

26. A man divided equally between his 6 sons 2580 dollars. How many dollars did each receive?

LESSON CVII.

How many times

1. 3 in 12?	19. 4 in 20?	37. 2 in 18?	55. 10 in 50?
2. 2 in 14?	20. 7 in 28?	38. 8 in 16?	56. 7 in 56?
3. 5 in 20?	21. 10 in 30?	39. 7 in 49?	57. 9 in 18?
4. 6 in 18?	22. 3 in 27?	40. 6 in 36?	58. 8 in 16?
5. 4 in 16?	23. 4 in 36?	41. 2 in 20?	59. 7 in 70?
6. 9 in 54?	24. 2 in 16?	42. 8 in 48?	60. 10 in 90?
7. 1 in 10?	25. 3 in 24?	43. 5 in 50?	61. 8 in 56?
8. 5 in 45?	26. 10 in 20?	44. 4 in 32?	62. 6 in 48?
9. 3 in 30?	27. 8 in 40?	45. 7 in 35?	63. 10 in 90?
10. 4 in 40?	28. 5 in 35?	46. 3 in 21?	64. 8 in 64?
11. 7 in 63?	29. 6 in 54?	47. 8 in 80?	65. 9 in 72?
12. 8 in 72?	30. 9 in 81?	48. 10 in 60?	66. 10 in 100?
13. 6 in 42?	31. 3 in 36?	49. 3 in 27?	67. 8 in 32?
14. 7 in 49?	32. 4 in 44?	50. 2 in 24?	68. 6 in 72?
15. 5 in 35?	33. 6 in 24?	51. 6 in 54?	69. 9 in 36?
16. 8 in 24?	34. 9 in 81?	52. 5 in 35?	70. 4 in 44?
17. 9 in 90?	35. 10 in 40?	53. 9 in 72?	71. 10 in 110?
18. 7 in 84?	36. 11 in 77?	54. 10 in 80?	72. 12 in 144?

WRITTEN EXERCISES.

73. If a man travel 315 miles in 9 days, how far will he travel in 1 day?

74. How many times is 9 contained in 1341?

75. A man divided 6314 dollars equally among his 5 sons; how much did each receive?

76. If a man earned 5200 dollars in 8 years, how many dollars did he earn in one year?

77. At the rate of 7 miles an hour, in how many hours can you travel 343 miles?

78. In one quart there are 8 gills; how many quarts are there in 1008 gills?

LESSON CVIII.

1. What is the sign of division? The **Sign of Division** is a short line with a dot above and below it, $\div$, and is read *divided by*.

2. In $8 \div 2$, what does the sign denote? It denotes that 8 is to be divided by 2.

WRITTEN EXERCISES.

Write and divide:—

$$\begin{array}{r} \text{(3.)} \\ 8 \overline{)1976} \\ \underline{247} \end{array}$$

$$\begin{array}{r} \text{(4.)} \\ 8 \overline{)1976(247} \\ \underline{16} \\ 37 \\ \underline{32} \end{array}$$

$$\begin{array}{r} \text{(5.)} \\ 12 \overline{)9217(768\frac{1}{12}} \\ \underline{84} \\ 81 \\ \underline{72} \\ 97 \\ \underline{96} \\ 1 \end{array}$$

$$\begin{array}{r} \text{(6.)} \\ 11 \overline{)4521(} \end{array}$$

$$\begin{array}{r} 56 \\ \underline{56} \end{array}$$

$$\begin{array}{r} \text{(7.)} \\ 9 \overline{)1760(} \end{array}$$

$$\begin{array}{r} \text{(8.)} \\ 13 \overline{)4578(} \end{array}$$

$$\begin{array}{r} \text{(9.)} \\ 6 \overline{)2784(} \end{array}$$

$$\begin{array}{r} \text{(10.)} \\ 14 \overline{)5754(} \end{array}$$

$$\begin{array}{r} \text{(11.)} \\ 15 \overline{)3525(} \end{array}$$

$$\begin{array}{r} \text{(12.)} \\ 8 \overline{)3219(} \end{array}$$

$$\begin{array}{r} \text{(13.)} \\ 12 \overline{)4980(} \end{array}$$

$$\begin{array}{r} \text{(14.)} \\ 16 \overline{)6880(} \end{array}$$

$$\begin{array}{r} \text{(15.)} \\ 10 \overline{)6672(} \end{array}$$

$$\begin{array}{r} \text{(16.)} \\ 20 \overline{)6280(} \end{array}$$

$$\begin{array}{r} \text{(17.)} \\ 17 \overline{)9541(} \end{array}$$

$$\begin{array}{r} \text{(18.)} \\ 31 \overline{)1542(} \end{array}$$

$$\begin{array}{r} \text{(19.)} \\ 22 \overline{)46266(} \end{array}$$

$$\begin{array}{r} \text{(20.)} \\ 40 \overline{)88440(} \end{array}$$

$$\begin{array}{r} \text{(21.)} \\ 18 \overline{)37848(} \end{array}$$

$$\begin{array}{r} \text{(22.)} \\ 19 \overline{)57409(} \end{array}$$

$$23. \quad 5636 \div 14.$$

$$24. \quad 7340 \div 15.$$

$$25. \quad 89190 \div 13.$$

$$26. \quad 84915 \div 17.$$

LESSON OIX.

WRITTEN EXERCISES.

(1.)	(2.)	(3.)	(4.)
13)2735(	22)4640(	24)5165(	9)2731(
(5.)	(6.)	(7.)	(8.)
15)4571(	17)4144(	4)63750(	10)4573(
(9.)	(10.)	(11.)	(12.)
21)7231(	24)4850(	6)3376(	22)18550(
(13.)	(14.)	(15.)	(16.)
9)39919(	5)67405(	18)37960(	9)6347(
(17.)	(18.)	(19.)	(20.)
7)11422(	11)6715(	16)64054(	21)5749(
(21.)	(22.)	(23.)	(24.)
11)6746(	17)8164(	8)7581(	15)77035(

— 25. If 1965 apple-trees are planted in 15 rows, how many trees in a row?

26. How many barrels of flour at 14 dollars a barrel can be bought for 3308 dollars?

27. Bought a farm for 4000 dollars at 25 dollars an acre; how many acres did it contain?

28. A farmer sold 20 horses for 4500 dollars; how much did he get apiece?

29. Bought hay for 4650 dollars, at 15 dollars a ton; how many tons did I buy?

30. How many coats, at 16 dollars each, can be bought for 5420 dollars?

LESSON CX.

1. Add 4 to 6.

2. Add 7 to 9.

3. Add 3 to 8.

4. Add 6 to 3.

5. Add 2 to 7.

6. Add 5 to 5.

7. Add 8 to 2.

8. Add 9 to 5.

9. Take 4 from 10.

10. Take 7 from 16.

11. Take 3 from 11.

12. Take 6 from 9.

13. Take 2 from 9.

14. Take 5 from 10.

15. Take 8 from 10.

16. Take 9 from 14.

WRITTEN EXERCISES.

	(1.)	(2.)	(3.)	(4.)	(5.)	(6.)
	12	81	47	116	621	1004
	31	67	37	311	710	4316
Add	62	11	44	341	205	715
	35	9	21	173	319	131
	40	15	8	95	142	177
	—	—	—	—	—	—

	(7.)	(8.)	(9.)	(10.)	(11.)	(12.)
From	1945	6745	1360	7937	46004	96345
Take	674	1636	454	6746	12305	62164
	—	—	—	—	—	—

	(13.)	(14.)	(15.)	(16.)	(17.)	(18.)
From	3456	397	4720	91340	8123	83406
Take	1747	298	455	78241	6140	74544
	—	—	—	—	—	—

	(19.)	(20.)	(21.)	(22.)	(23.)	(24.)
From	4634	2763	1631	1572	7344	6420
Take	1725	475	146	443	2575	4332
	—	—	—	—	—	—

LESSON CXI.

How many are

1. 6 times 7?
2. 8 times 5?
3. 5 times 3?
4. 7 times 4?
5. 3 times 10?
6. 4 times 9?
7. 8 times 6?
8. 9 times 9?
9. 8 times 6?
10. 7 times 8?
11. 5 times 9?
12. 6 times 8?
13. 7 times 7?
14. 8 times 10?

How many times

15. 7 in 42?
16. 4 in 40?
17. 3 in 15?
18. 4 in 28?
19. 10 in 30?
20. 9 in 36?
21. 6 in 48?
22. 9 in 81?
23. 8 in 48?
24. 7 in 56?
25. 9 in 45?
26. 6 in 48?
27. 7 in 49?
28. 8 in 80?

WRITTEN EXERCISES.

	(1.)	(2.)	(3.)	(4.)	(5.)	(6.)
Multiply	7367	1406	167	4015	44416	61706
By	6	12	8	23	16	25

	(7.)	(8.)	(9.)	(10.)	(11.)	(12.)
Multiply	314	1709	2235	4625	789	40310
By	13	31	28	20	33	64

	(13.)	(14.)	(15.)	(16.)	(17.)	(18.)
12)3147(	8)8405(	6)714(	15)4650(	4)774(	25)2575(	

	(19.)	(20.)	(21.)	(22.)	(23.)
13)2730(	4)67454(	21)45164(	7)1967(	9)17740(	

LESSON CXII.

WRITTEN EXERCISES.

1. In Smith's farm there are 325 acres, and in Hale's farm 264 acres. How many acres are there in both farms?
2. In one town there are 450 voters, and in another 673. How many more in one than in the other?
3. A miller ground 315 bushels of grain in one day, and 451 bushels in the next. How many bushels did he grind in both days?
4. In one week there are 7 days; how many days are there in 52 weeks?
5. How many casks of 3 bushels each will be required to hold 561 bushels of potatoes?
6. How much can a man earn in 45 weeks at 18 dollars a week?
7. If you can solve 16 problems in one day, how many can you solve in 312 days?
8. A boy wishes to divide 1144 apples equally among 22 school-fellows; how many can he give each?
9. How many barrels of flour at 10 dollars a barrel can be bought for 4160 dollars?
10. In one bushel there are 4 pecks; how many pecks are there in 564 bushels?
11. If a shoemaker can make 12 pairs of shoes in one week, how many pairs can he make in 52 weeks?
12. If 4160 dollars be paid for 416 barrels of flour, what is the cost per barrel?





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